

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. X.—No. 4.

ALBANY, N. Y., APRIL, 1843.

CULT. & FAR. VOL. IV.—No. 4.

PUBLISHED MONTHLY.

GAYLORD & TUCKER, EDITORS.

LUTHER TUCKER, PROPRIETOR.
Office, No. 20 Market-street, Albany.

One Dollar per annum—Six Copies for \$5.
(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and
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Subscriptions to commence with a volume; and the money
to be sent free of postage.

THE BACK VOLUMES OF THE CULTIVATOR,
Handsomely stitched in printed covers,
Can be furnished to new subscribers—Vols. I. II. III. IV. at 50
cents each, and Vols. V. VI. VII. VIII. IX. at \$1. each.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

REMOVAL.

THE office of "The Cultivator" has been removed to
No. 20 Market-street, a few doors south of the Ex-
change.

MONTHLY NOTICES.

COMMUNICATIONS have been received, during the past
month, from Matilda W. Howard, Senex, N. Worthing-
ton, A. Brentnall, W. Mentelle, H. W. Tibbits, H.
Mooers, Commentator, George Edwards, William Lar-
kin, B. B., J. N. Keeler, L. A. Moody, E. Townley, A.
Friend to Ag. Improvement, L. G. N., Wm. Partridge,
J. R. Speed, F. P. F., T. M. Niven, George Vail, C. N.
Bement, R. F. Houston, E. Tucker, Will. C. Carr, Levi
Durand, Alex. Walsh, J. H. Young, A. Young Farmer,
Dr. R. T. Underhill, G. M. Hayward & Co., J. J. Thomas,
Henry Palmer, G. C. M., Frock & Trowers, F.

ACKNOWLEDGMENTS.—We tender our thanks to Mr.
COLMAN, for the "First Annual Report of the Monroe
Co. Ag. Society, for 1842"—a handsome pamphlet of 68
pages.—To Messrs. HOVEY & Co., Boston, for a copy of
Dr. Harris' "Treatise on some of the Insects of New
England, which are injurious to vegetation," an octavo
vol. of 460 pages.—To some unknown friend, for a copy
of the N. J. State Gazette, containing a communication
from Caleb Smith Green, Esq., President of the N. J.
State Ag. Society, "on the decrease of Fruit"—To R.
& G. S. Wood, New-York, for their reprint of the
"Medico-Chirurgical Review and Journal of Medicine,"
for January, an invaluable work for medical gentlemen;
published quarterly, at \$5.00 per annum.—To ELWANG-
ER & BARRY, proprietors of the Mount Hope Garden
and Nursery, Rochester, for their Annual Catalogue for
1843.—To W. R. PRINCE & Co., Flushing, for their An-
nual Catalogue of Bulbous and Tuberous rooted Flowers
—To CAREY & HART, Booksellers, Philadelphia, for
Nos. 2 and 3, of The Farmer's Encyclopedia.—To the
Editors of the Tribune, New-York, for the 2d No. of
"Useful Works for the People"—To H. S. RANDALL,
Esq., for a copy of his Address before the Cayuga Ag.
Society.—To A. G. CARLL, Esq., for an "Address before
the Queens Co. Ag. Society, by Hon. Wm. T. McCoun"
—To the EDITORS of The New Farmer's Journal, London,
for the files of their paper for February.—to the EDITOR
of The Farmer's Herald, Chester, England, for the nos.
of his paper for Jan., Feb. and March—also to P. L. STI-
MONDS, Esq., London, for a no. of the same work: This
is a new monthly agricultural publication, 16 large oc-
tavo pages, at the low price of 3d per no.; and if we
may judge from the nos. before us, will deserve, and we
doubt not will receive, an extensive circulation.

A FAT SHEEP.—The fattest sheep ever slaughtered in
this vicinity, was exhibited at the Center Market on the
22d of Feb., by Messrs. McGuigan & Walsh. It was a 32
months old wether, a cross of the Cotswold and South
Down breed, bred and fattened on the farm of J. M'D.
McINTYRE, Esq., near this city. Its live weight was 260
lbs. The carcass dressed, with the head on, which was
very small, weighed 210 lbs., showing a difference of
less than one-fifth between the live weight and carcass.
The only feed of this sheep during the past summer, was
a clover pasture. From the 1st of October to 15th Nov.
he was huddled with others upon turneps. From that
time till he was slaughtered, he was fed, with three
South Down bucks, under cover, with turneps, buckwheat
and clover. One bushel of turneps and three quarts of

buckwheat, together with about 2 lbs. hay, were fed to
the four daily. Mr. McIntyre is still feeding the South
Downs, which are destined for the New-York market on
the opening of navigation.

FAT OX AND CALF.—On the same occasion, (Wash-
ington's birth day,) Messrs. M'GUIGAN & WALSH ex-
hibited the carcass of an ox, fattened by Messrs. Terry &
Hubbard of Sangerfield, whose live weight was 3,300
lbs.—dead weight 2,541 lbs.—and a calf fed by Mr. J.
Cary of Rensselaer county, 13 weeks and 4 days old,
whose live weight was 478 lbs.—carcass, 386 lbs.

"HEREFORD HALL."—We last week visited Mr. Cor-
ning's farm, situate on the west bank of the Hudson,
about three miles below this city, to which Mr. Sotham,
who now occupies it, has given the name of "Hereford
Hall." We found the Herefords and Cotswolds in fine
condition, and rapidly increasing. Mr. S. informed us
that from nine ewes which came in first, he had 20 lambs
—5 ewes having twins, and 3 had 3 each. Eleven of his
Hereford cows had calved since the first of January, and
he is now making from their milk, over 60 lbs. of butter
per week. His calves, which were in fine condition, he
feeds on skim-milk and flax seed jelly, mixing one part
of the jelly with four of the milk. Mr. S. informed us
that it was his intention to keep an exact account of all
the butter and cheese made from his Herefords during
the season, the result of which should be given in the
Cultivator, in order to show that they deserve the credit
he claims for them as dairy cows. He wishes, and we
second the motion, that other farmers would keep a si-
milar account, that the results with different breeds may
be compared.

MISDIRECTION OF LETTERS.—In forwarding to us a
letter, misdirected to Philadelphia, the postmaster of
that city wrote the following note:—"Letters for your-
selves and other publishers are so frequently misdirected
to Philadelphia, that I would suggest to you the propi-
ety of publishing an article on the subject in your useful
and widely circulated paper." We presume that more
than one-half of the letters supposed to be lost in the
mail, fail to reach their proper destination through care-
lessness in directing them. We have several times had
letters forwarded to us, which had been misdirected to
Philadelphia, New-York, Utica, Auburn, and Rochester;
and in several instances where letters have failed to ar-
rive, we have been inclined to lay the blame rather to
misdirection than to the post office department.

FARM HOUSES, &c.—We give to-day, a plan of a
Farm House, from one of our lady readers, the wife of
our friend and correspondent SANFORD HOWARD, whose
name we are pleased to introduce to our readers, and
from whom we should be much gratified to receive fre-
quent contributions. We have also in the hands of the
engraver, the plans of the necessary out-buildings for
the farm house given in our Jan. No. by Mr. NIVEN—
also another plan of a farm house, in the Tudor style
of architecture, from the same gentleman, which will be
given next month. In the mean time, without the
knowledge of Mr. N., we take the liberty to recommend
to any of our friends who may want designs and plans
of buildings, to apply to Mr. Niven, who is a practical
architect, and who we presume will furnish such de-
signs, with the necessary specifications, working plans,
&c. for a reasonable compensation. Address, post paid,
T. M. Niven, Esq., Newburgh, N. Y.

CORN STALK SUGAR.—Extract of a letter from Wm.
C. ROGERS, Esq., Caledonia, Tenn., to the editors of
the Cultivator:—"Mr. J. L. VAUGHAN, one of your
subscribers, has tried the experiment of making sugar
from corn stalks, but did not succeed altogether agree-
ably to his expectations; but he intends this year to plant
eight or ten acres, for the purpose of making another
trial. He planted late in June last year, and an early
frost killed the corn before he began. From one acre
of corn, however, he made about seventy gallons of
molasses of as good a quality as I ever saw." We
have seen it stated in a Tennessee paper, that the press
used by Mr. Vaughan to press the juice from the stalk,
cost but \$6. Will Mr. V. oblige us with a description
of his press, for the benefit of our readers?

BERKSHIRES.—In our notice of the premiums award-
ed by the Hancock (Ga.) Planters' Club, in our Jan. No.
we stated that the first premiums on swine "were
awarded to Col. John Bonner, on Rip Van Winkle and
Nonesuch, two animals sent him by Mr. Bement last
autumn." In this, we made a slight, though uninten-
tional mistake. The premium for the best sow was di-
vided between "Nonesuch" and the "Flower of Or-
ange," both owned by Col. Bonner. "Flower of Or-
ange" was bred by Messrs. A. & G. Brentnall of Can-
terbury, Orange county, and was considered by them as

the best sow they ever bred or imported, and they con-
sider her (if their experience and observation amount
to anything) second to no sow of her size in the
Union. They (A. & G. B.) have sold to Col. Bonner
seven sows and a boar, which have all met his decided
approbation, and some of the animals at prices more
than double elsewhere paid to celebrated breeders." Col.
Bonner has choice selections from all the best piggeries
in this State, and we unite with Mr. Brentnall in recom-
mending our southern friends to him for their supply of
Berkshires; and we think we may safely recommend
those who wish for good specimens of the same breed
from this State, to the Messrs. Brentnall.

PLOWS.—At page 184, vol. 9, we gave an extract of
a letter from Baltimore, relating to a trial of plows said
to have taken place near that city. We have received
a letter from Mr. MOOERS, stating the circumstances
under which that trial took place, which accounts very
satisfactorily for the heavy draft charged to Barnaby &
Mooers' Side-hill Plow. We thought then that there
must have been some mistake about the matter, and
would cheerfully publish Mr. Mooers' letter, did we
consider it necessary; but we think those who will take
the trouble to look at the results of a previous trial at
Baltimore, recorded at p. 156 of the same volume, will
be satisfied as to the lightness of the draft of the Side-
Hill Plow.

WHAT A DOLLAR WILL PURCHASE IN ILLINOIS.—A
subscriber at Little Woods, says:—"I have at last suc-
ceeded in apprehending an Eastern bill perambulating
our hard currency state. With us, the enclosed is equi-
valent to three bushels of wheat, eight bushels of corn,
or twelve of oats—or 1 cwt. of beef or pork, a yearling
steer, or a hecatomb of hogs. Will it pay for one year's
subscription to the Cultivator, for mauger my resolutions
of economy and retrenchment, I find I cannot do without
it." Another correspondent in Illinois, says—"Blessed
as we are with a rich soil, we cannot make money by
farming, at present prices—wheat 31 to 35 cents—corn 8
to 9 cents—pork, \$1.00 to \$1.50 per 100 lbs. and no mo-
ney even at these low prices."

PRICES IN INDIANA.—A letter from a correspondent in
Davies county, says:—"Pork is selling here at from \$1.00
to \$2.00 per 100 lbs.—wheat, 37½ cents per bushel—corn,
12½ cents, and other produce at similar rates."

PRICES IN MISSOURI.—Our agent at Hannibal says:—"Wheat is only 25 cents cash per bushel—corn, 10 to
12½ cents—pork, \$1.50 per 100 lbs., and stock cheaper."

KNIT DRESS.—At the Fair of the Suffolk co. (N. Y.)
Ag. Society, in Oct. last, a premium was awarded to Miss
Elizabeth Thompson, for a cotton and worsted dress,
knit whole, and without any sewing. The skirt was knit
with three threads on five needles, and the waist with
two needles and one thread.

LOUISIANA.—The 2d Fair of the Louisiana State Ag.
Association, was held at Baton Rouge, on the 10th Jan.,
and was well attended—the exhibition attracting there,
as others have in other places, much more attention than
was anticipated. Among the recipients of premiums,
we are pleased to see the names of a number of our sub-
scribers in that state.

SCIONS.—"F. P. F., Bridport, Vt., is informed
that scions of select varieties of fruit may be had of
nurserymen. The price, we believe, is the price of the
tree for a dozen scions."

REAPING MACHINE.—"A Young Farmer" wishes to
know if the harvesting machine mentioned in the Dec.
No. of the Cultivator for 1841, by Solon Robinson, Esq.,
has answered the expectations there held out. Will Mr.
R. please inform us? If the machine has proved suc-
cessful, we should be glad to receive a description and
drawing of it.

THE FARMER'S ENCYCLOPEDIA.—The Nos. of this
work are promptly issued, twice a month, by Carey &
Hart, Philadelphia. Nos. 2 and 3 have been received;
the first is adorned with a plate representing the differ-
ent varieties of Wheat, with its most destructive ene-
mies, and the latter with a view of a Russian Beehive
and the *Echium vulgare*, or Ciniak, with its root, efflo-
rescence and nut-like fruit. The work is to be com-
pleted in 16 Nos. at 25 cents each.

NEW WORK.—Prof. Kirtland of Ohio, has a work
ready for the press, entitled "The Western Orchardist,
adapted to the use of Farmers, Horticulturists, and Cul-
tivators of Fruits in the Western States of the Union." Its
contents are mostly original—the result of the au-
thor's own experience and observation.

HUSSEY'S CORN AND COB CRUSHER, &c.—"E. B." of
Princeton, Ill., inquires if this machine can be had in
New-York, and whether Warren's Horse Power can be

conveniently used to work it. We are not aware that Mr. Hussey's machine is for sale at any other place than by the proprietor, in Baltimore. It can be worked, we presume, with Warren's Horse Power. It is proper to remark, however, that we have received a letter from a correspondent in Virginia, who thinks that the purchasers of this power will be disappointed in their expectations respecting it, as he certainly has been. The letter has been mislaid, so that we cannot give the objections he brings against it; if it comes to light, we shall forward it to the vendors of the power for their consideration. "C. B.'s" suggestions are under consideration. It is not improbable that we may adopt the plan he has proposed.

MADDER.—Mr. E. Tucker of Onondaga county, in answer to a request in our Feb. No., gives us his experience in the culture of madder. About eight years since, he procured seed roots at a cost of \$20, and set out about half an acre, agreeably to the directions in the first volume of the Cultivator, on loose land, good for Indian corn or wheat, well manured. He tilled it three years, dug it, dried it in a kiln, and ground it in a grist mill. Thus prepared, the product was not worth over \$20. Two or three of his acquaintances tried it, with similar results.

BUTTERNUT SUGAR.—"One of your Readers," from Brattleboro, Vt. recommends the repetition of an experiment (made in that county with success) of making sugar from the sap of the common butternut, *Juglans cathartica*. He says that in the instance alluded to, the "sap furnished as much and as good sugar as that of the maple." Experiments of this kind were tried in Connecticut more than forty years since, and have frequently been repeated since in New-England; but not, we imagine, with such success as to warrant a repetition. The sugar, unless very thoroughly cleared of its remaining molasses after graining, would be likely to retain too much of the cathartic properties which gave the tree its name, for common use.

STRAWBERRY SEEDS, of the variety inquired for by Mr. Howard of Windsor, Ct., are not to be had, and if they were, would not produce the same fruit. The only way to obtain the kind wanted, is to procure the plants.

☞ **G. E. M.,** Greenfield, Mass., will be welcome to the articles he wants, provided we have any to spare. His communication shall appear in season for next winter's operations.

PRODUCT OF TWO COWS.—"A Friend to Agricultural Improvements" informs us that he keeps two ordinary cows, and that last spring he thought he would weigh the butter made from them through the season; not, however, with the idea of making all they possibly could, as his family used cream and milk as freely as ever, and he raised two calves. The product was 325 lbs., and the cows are still milking. This was certainly a good yield, and one which few common cows will equal.

The same correspondent says he likes the plan of a house given in our Feb. No., but that the oven should have been placed on the other side of the chimney, to prevent heating the buttery. He also objects to D. G. M.'s "Self-foddering Barn," as he thinks cattle will draw out more than is necessary, and that it will be trodden under foot and wasted.

NIGHT SOIL.—Our correspondent, R. F. Houston of Alabama, who inquires for the best method of preparing night soil for use, &c., will find all the information necessary in the communication of Mr. Woodfin, given at p. 48, current vol. of the Cultivator. He is also referred to page 200, vol. 9, for a method of preparing it practiced in England.

MICHAUX'S FOREST TREES.—D. C. wishes to know if the publication of this work, with Mr. Nuttall's additions, has been completed, the price, &c. We believe the volumes have all been published. The price of the 7 vols., with colored plates, is \$35. It may be had of J. Dobson, publisher, Philadelphia, or we presume at bookstores in New-York.

QUEEN BEES.—We are sorry we cannot spare room farther to argue the question of the existence of such a thing as a queen bee with Mr. HENRY PALMER of New Marlboro, who is determined to believe in their non-existence, "the editors of the Cultivator and a great array of correspondents notwithstanding." Most of the questions he now asks, were answered at p. 155 of our last vol., to which he is referred.

VALUABLE COW.—The Amsterdam (N. Y.) Intelligencer says that Mr. J. Hagaman of that place, has a cow, that from the 1st of June, 1842, to the 1st of Feb. 1843, a period of eight months, yielded 202 lbs. of butter, and \$5.56 worth of milk, sold; and now gives eight quarts of milk a day.

GEESSE AND LAMBS.—J. Beach, Esq. of Eastkill, Greene county, who thinks it economy to take the Cultivator, even in these hard times, because he is sure he saves ten dollars a year by it, says that a good farmer "with a thriving housewife, should keep geese. With good fences they are no trouble; it costs little to keep them, and a small quantity of tar and sulphur, mixed and put on the head and neck, at picking time, will protect them against the foxes till the next plucking time. My nine geese, last season, thus protected, all lived through well. Of my neighbor's thirty-two, not protected, the foxes took twenty-three. Mine were equally exposed as his. The same mixture, put on the head and neck of young lambs, will protect them for a month at least. I have oftentimes tried it, and saved them, while others have

lost many of theirs. It may be repeated at any time, if the lamb is not large enough to protect itself. The materials are in the reach of every farmer, and will not cost one cent a head. Can any of your correspondents tell of any protection to our dunghill fowls, against minks, (we have many of them in our streams and mill dams,) short of shutting them up nights?"

THE TIMES IN VIRGINIA.—We make the following extract from a letter from an esteemed friend at Lynchburg:—"We are not prosperous; our late crop of wheat was greatly injured, and in many instances totally destroyed by the rust. This is the third crop, in regular succession, that has been a more general failure than any before recollected. Our tobacco crop, too, a very important one in this part of the State, is a very inferior one, in consequence, it is believed, of the wetness of the season. In addition, we had in the month of July a most destructive flood, which pervaded an extensive district, and did great injury to the crops and lands. And last, though not least, we have overbanked, which has not only produced overtrading, but overaction in all the departments of life—improvident contracts and every species of personal expense, and are now suffering the effects of a rapidly decreasing currency—are in that state of contraction or collapse which, though not regularly, yet as certainly follows an improper expansion, as the night succeeds day. Our legislative quacks are proposing various remedies, stay laws, valuation laws, issues by the banks; and some even go so far as to propose another suspension of specie payments—one of the effects of which would be, finally, to renew that portion of suffering which we have already passed through. But it is to be hoped that none of these nostrums will be forced on the patient, as some of the best judges think they would only aggravate the disease, and that nothing but industry, economy, and time will cure it."

"THE SOIL AND THE MIND."—A correspondent in New-Jersey, "H. W. S. C.," says:—"The harder the times, the more need I have of studying and contriving the best means of getting along, and consequently I cannot afford to give up so valuable an assistant as the Cultivator. Among the many points of resemblance between the 'soil and mind,' there seems to me scarcely one more striking than the effect of constant cultivation. Keep the ground loose, and prepared to receive the benefit of all the favorable influences which are brought to bear upon it; and keep the mind ever active and open to receive whatever information it meets with; to digest it well, and choose that which is true and sound, rejecting the false and hurtful. And so I say to the farmer, read—read—read; if you can't get hold of new works, read the old ones over, and you will find the effect is like plowing up an old field. There is no reason why a farmer should not cultivate his mind as well as his land; and the man who does both, in a proper spirit, is the truest philosopher and the happiest man."

"USEFUL WORKS FOR THE PEOPLE."—Under this title, Messrs. GREELY & CO., publishers of the New-York Tribune, have commenced the publication of a series of works, in pamphlet form, intended, by their cheapness, for general circulation. The first number, containing "Farnham's Travels through Oregon," we have not seen. The second number, just issued, contains the very valuable Report of the Hon. H. L. ELLSWORTH, Com. of the Patent Office, (for an extended notice of which, see next column of this paper,) on the "Improvements in Agriculture, Arts, &c. in the United States," made to Congress at its late session—together with a "Treatise on raising Swine, and the best method of fattening Pork," from Mr. COLMAN's Fourth Report; and an article on "Geology as connected with Agriculture," from the pen of our associate, Mr. GAYLORD—making together a pamphlet of 80 closely printed octavo pages, put up in the style of the Magazines, and all for twenty-five cents, or five copies for \$1.00. Orders by mail, free of postage, addressed to "Editors Tribune, New-York," will be duly attended to. The work may also be had of GEO. JONES, newspaper agent, in this city. It should be in the hands of every farmer in the country, and we think many of our statesmen might find the study of it an advantage.

MORSE'S CEREOGRAPHIC ATLAS.—We have received the second sheet of this Atlas, embracing maps of Florida, Georgia, Alabama, Mississippi, Louisiana, New-York, and New-York city, eight in number. The Atlas is got up in a large quarto form, in a beautiful style, and for minuteness and correctness, will not be exceeded by any Atlas of the United States. It is issued at the office of the New-York Observer, and furnished gratuitously to subscribers to that excellent Journal. Mr. Morse's plan is a comprehensive one; and on its completion will furnish a series of maps invaluable to the scholar and general reader.

WHEAT CROP OF PITTSFIELD, MICH.—We find the following facts (certified to, by six respectable gentlemen,) respecting the wheat crop of this town in 1842, in a western paper:—"Number of acres harvested, 2,997. Number of bushels, 50,408, being a fraction over 16 bushels and 2 pecks per acre, on average. Number of acres sowed 3,659, being an excess over last year of 662 acres. The town contains a population of 1,300, and allowing 5 bushels for the consumption of every man, woman and child, and 4,574 bushels for seed, would leave a surplus of 39,424 bushels for market. This, at a dollar a bushel, would clear every farmer of debt, and purchase his wife a Silk Dress. If any town in this county or state, have beat us, we should like to know it."

MR. ELLSWORTH'S REPORT FOR 1842.

THERE can be but one opinion as to the intelligence, zeal and industry, brought by the presiding officer of the Patent Office at Washington, to the fulfillment of his duties. His Report for the year 1842, (the receipt of which was acknowledged by us last month,) is before us, and we doubt not, it will be considered by the great mass of the people, one of the most valuable the past session of congress has produced. Of its contents, we shall proceed to give a brief notice.

It appears, that the patents issued the past year were 517. Re-issued, 13; and 15 improved. During the same time, 332 patents have expired. The receipts for 1842, amount to \$35,790 96; the expenses, \$23,154 48; showing at least one department at Washington, not bankrupt in its finances. The whole number of patents granted in the United States, previous to January, 1843, was 12,992. His remarks on the necessity of such additions to the Library, as shall enable applicants to determine, by reference to former projects or present patents of the same kind at home or abroad, the propriety of taking out patents, are evidently just. But it is with his remarks, and the facts he has collected on Agriculture, that we have at present to do. These are included in an appendix of some 100 pages.

And first, is a tabular estimate of the crops for 1842. It is based, of course, on the U. S. Agricultural census of 1840, but corrected with great care; and so far as our correspondence with all parts of the Union enables us to judge, with a good degree of correctness. We subjoin the aggregate of some of the most important products, and such of our readers as please, may compare the products of 1839 and 1842 by referring to the statistical tables in a former volume of the Cultivator.

Wheat, bush.	102,317,340	Tons of hay...	14,053,355
Barley,	3,871,622	" flax & hemp,	158,569
Oats,	150,883,617	lbs. of Tobacco,	194,694,891
Rye,	22,762,962	lbs. of Cotton,	683,333,231
Buckwheat,...	9,483,409	lbs. of Rice, ..	94,007,484
Indian Corn,...	441,829,246	lbs. of Cocoons,	244,124
Potatoes,	135,883,381	lbs. of Sugar, ..	142,445,199

This statement is followed up by remarks on the several crops, and the causes which have increased or diminished them for the current year; on the various new products that promise to become important aids to Agriculture, such as the making of oil from lard, sugar from corn-stalks, &c., and on the state of the markets at home and abroad; and the probable results of the efforts now making, to extend the consumption of our grain and meat in foreign countries. On all these topics, and many others, he has brought together a mass of facts, which cannot fail to be examined with much interest.

Those parts of the Report relating to the manufacture of sugar from corn-stalks, and the conversion of lard into oil, with the correspondence accompanying them, are the best and most complete accounts of these processes yet given to the public, and are certainly most opportune, as the attention of farmers in all parts of the country has of late been much directed to them. The thanks of the community are due to Mr. Ellsworth.

NATURAL HISTORY OF NEW-YORK.

WE have received three more volumes of this splendid work; consisting of Prof. Emmons' Report of the 2d Geological District, Dr. DeKay's continuation of the Zoology of the State, embracing the reptiles and fishes; and a volume of plates illustrative of the various species of these animals found in the state. The engravings of this part, are much superior in execution, as a whole, to those of the Mammalia, and will well compare with the best specimens of animal engraving extant. The descriptive part by Dr. DeKay, is well written, and evidently with great care. That it should be perfect, no one acquainted with the natural sciences will expect, but all will rejoice at such an immense advance towards a full and accurate knowledge of the animals of this state, as is disclosed in these volumes.

Prof. Emmons has given an excellent report on the geology of the district assigned him; with a great variety of engraved views, maps and sections, rendering his descriptions much more clear and satisfactory. Having in our two last numbers, devoted so much space to a notice of Prof. Vanuxem's Report, we must pass over that of the 2d district, briefly; particularly as the names for the systems and series of rocks are the same in both, with the exception that the body called the Pulaski shales by Prof. V., are named the Lorraine shales by Prof. E., as the development of this rock is much more complete at the latter than at the former place. Prof. Emmons contends strongly that the lower limestones are primitive in the same sense, and have the same origin as the admitted primitive rocks, such as granite, gneiss, &c., and we think some of his arguments and examples difficult of refutation or evasion. As showing the distance to which blocks of this primitive crystallized or dolomite limestone has traveled, we may say that we have seen large specimens of it, plates of yellow mica mingled with the lime crystals, on the highlands in the south part of Onondaga co. The nearest point to limestone of this kind, is in the beds described by Prof. E. in the east part of St. Lawrence co.

The utility and importance of this great State work, becomes more apparent as the work advances; and we trust the efforts to distribute the copies of the work throughout the state will be successful. Next to a knowledge of ourselves, is a knowledge of the world around us, and the varied beings by which it is tenanted.

Answers to Inquiries, &c.

PARING AND BURNING SOIL FOR MANURE.

"MESSRS. EDITORS—Will you please give us through your paper, the manner of paring and burning the soil for manure, and the way to apply it after it is prepared? Livingston, Ala. Jan. 1843. R. F. H."

Paring and burning the soil, is a practice we have never known adopted in this country to any extent, although it is common in some parts of Britain and the continent. It is practiced, to clean the soil of all foul vegetables, or such as are not wanted, and to procure the ashes as a manure, which is highly prized. All the vegetable matter is charred, or converted into ashes, and the earthy matters of the soil, particularly the clay and the lime, are brought into that condition in which they are most useful in the soil. There are a variety of implements used for paring lands, some of which are worked by hand, and some by horses; the latter, always where the turf is heavy or abounding in coarse grasses. Figures of quite a number of these implements, may be found in the British Husbandry, vol. I, page 342—348. Paring is rarely carried into effect to a greater depth than 3 inches, and frequently not more than an inch is cut off; the average may be about 2 inches. The work should be done in the spring, that there may be time for the drying and burning in the summer. It has been found that the common plow with the wing of the share made sharp, will answer very well for paring, where the sward is tolerably good and the surface level.

When the turf is dry enough to burn, it is piled in large heaps of from 10 to 20 cart loads each, carried up like a chimney with an opening in the middle, and fired by the fuel that happens to be the most convenient. The turf must be laid close to keep out any draft of air through the heap, as otherwise the heap is liable to be only partially burned. Should the fire break out, it should be stopped with more turf, or covered with fine mold or ashes; and in this state, heavy rains will do little injury, as the heat will prevent it penetrating the pile. In some cases when a heap is once well fired, turf is continually brought and piled on, until the whole is expended. As too much burning is considered injurious, the burners, or the cultivators, open these heaps when about half burned, with a shovel, and carry upon the land the mass, as fast as it is fit for use. The methods of burning, however, are numerous, and the one we have described is as simple and easy as any. The quantity of ashes will of course depend on the nature of the soil burned. When performed on turf of a medium quality, and of the thickness of two inches, it has been known to give from 2,000 to 2,400 bushels per acre. On light dry soils, paring and burning is not advisable, as it makes such lands lighter and dryer; on clays and heavy loams its effects are most beneficial.

In the work to which we have alluded, a summary of the best practice is given, from which we condense the following directions:

1. Drain perfectly, and lay dry before commencing paring.
2. Regulate the thickness of the paring, by the nature and depth of the turf.
3. Burn slowly, but completely, so as to reduce the whole to ashes.
4. Spread these ashes upon a shallow plowing, and as fresh as possible.
5. If the land is clayey, mix a moderate quantity of lime with the ashes.
6. Sow the seeds as promptly as may be, after the ashes are spread and plowed in.
7. Commence with turneps or barley; never sow wheat till the soil is in good tilth.
8. Apply the whole manure produced by the crops, to the ground on which they are grown.

ROLLERS.

"MESSRS. EDITORS—Will you, or some of your subscribers, furnish a cheap plain cut of the best roller for a sandy soil, and much oblige."

A SUBSCRIBER AT THE SOUTH."

The plan of a roller we here give, (see fig. 23,) is one of the most simple kind, and at the same time very effective.

It is simply a log from 6 to 9 feet in length, the diameter at each end the same, and turning in the frame on iron pivots, square where driven into the wood, into which they should enter some 18 inches, the projecting parts to be carefully rounded so as to work easily in the frame. The diameter of the roller may be of any required size consistent with weight; but it must be remembered that the larger they are, the easier they will roll. The one we have used for many years, is about 34 inches in diameter, and we find works much easier for the team than a former one which was only 20 inches. There is another roller made by passing an auger through the center of the log, through which a 1½ inch iron rod is passed, secured at each end to the frame, by a head and screw. This roller is divided in the middle into two parts, kept at a little distance apart by an iron ring or washer slipped upon the axle or rod between them. This roller at the end of lands, turns more easily than when left whole, but is not materially better in other respects. Where a log of sufficient size was not convenient, we have seen a good roller made by spiking narrow plank on the outside of two fore wagon wheels, and then driving as a tire upon the center and each end, a stout iron bar. If not heavy enough, a frame work with a box may be put up-



Roller.—(Fig. 23.)

on it, and loaded with stone as desired. There is no difference required between a roller for a sandy soil, and others, except that the lighter the soil the greater the pressure desired, and consequently the heavier the roller should be.

MANURING MEADOWS.

"EDITORS OF THE CULTIVATOR—A large part of the manures I make this winter, I wish to apply to my meadows. Shall I draw it on this winter or spring, or let it lie in the yard, or heap it till next fall? My manure is made from corn stalks, hay, straw, &c., fed to 100 sheep and 20 head of cattle, in yards. Some of my meadows will poach much, if cattle or carts are driven over them when the frost is out in the spring. I find that experienced farmers disagree on this subject, and I wish you to direct. H. HULL."

Claverack, Feb. 1843.

Our experience in manuring meadow land, would indicate that in all ordinary cases, manure should be rotted or composted before using. When applied in a long or green state, it will not spread as evenly; it will not produce so speedy or so good an effect; and it frequently, when applied in quantities, obstructs the action of the scythe and the rake. We have known long manures or straw, when spread on very dry land early in the spring, produce a good effect, as it checked the escape of moisture, and in that way benefited the grasses. But we prefer forming our meadows and pastures in rotation with other crops, and in this way the manures are first applied to the crops, roots or corn, that receive the most benefit from fresh manures. In this method, manuring the grasses directly, except with a dressing of plaster, is not practiced, and is found to be unnecessary.

As it is inconvenient in some cases, to subject meadows to a rotation, manure must be applied, or the grass will fail in quantity and quality. The practice with the best farmers in England, and that which is the most successful here, is to manure them with good rotten dung as often as once in three years; the manure to be used as soon as the hay crop is off, if the season is wet; but if not, late in autumn or early in the spring, which latter practice is far the most common. When a meadow is manured, the quantity should first be evenly spread, then a fresh supply of good grass seeds sown over the whole, and the surface then thoroughly scratched with a light many toothed harrow, or well brushed with close thick set brush. In this way, a meadow may be fully renewed, and kept stocked with the best grasses. If "H. H." has a supply of swamp muck on his farm, he will find his stock of good manure greatly increased, if while heaping his manure in the yard or field, he adds to each load of yard dung, two loads of muck; since when placed in layers and fermented together, this compost is fully equal to the best stable manure. Meadows that are apt to poach, should never be trampled by animals when wet, nor should any meadow be fed as closely in the spring and fall, as too many are accustomed to do.

TREATMENT OF SOIL.

MR. SESSIONS of Ionia, Mich., makes some inquiries respecting the management and improvement of his farm. It was originally covered with white, yellow, and burr oak. Part is sand, another part clay, and another part gravel, or stony. From this last part, the stones of suitable size have been drawn for fencing; the cobble stone is to be removed for building. The grounds are new, and in wheat. Mr. S. asks whether clover would succeed on such a soil—whether plaster would be useful—and to what crops such a soil is best adapted? On one side he has rich alluvial bottoms, and on the other timbered swales; and he asks, whether these may not be made available to the improvement of the farm, or fitted for cultivation without too much expense?

There would seem to be no difficulty in the treatment of such a soil, as that described by our correspondent. The sandy and gravelly parts are of course dry, and the clay division, if naturally wet may be made so by draining. There should not be too much anxiety to get rid of all the fine or small stones on the gravelly part, as if of lime or granite, they contain substances essential to fertility, and which they furnish by gradual decomposition. Lands have frequently been injured by a too close removal of small stones. We should think that clover could not fail on such lands, and that plaster would be highly valuable; certainly on such soils in western New-York, clover and plaster would be the first resort of the farmer. As to crops, if clover and wheat will succeed, Mr. S. need not fear that others will fail; and when exhausting crops are produced, they must be met by corresponding additions of manure. If the alluvial, or swale lands, are wanted for culture, the first step is to drain them thoroughly, and then they will be found the most productive of soils, particularly in roots and grasses. If they are relied upon as sources of manure, or for the means of fertilizing the other parts of the farm, the swamp muck or vegetable matter should be made into compost, by mixing with it stable or barn yard manure,

in the proportion of two-thirds muck to one-third manure, the whole allowed to ferment, and then after being thoroughly shoveled together, it may be applied as wanted.

OIL SCRAPS AS A MANURE.

"MESSRS. EDITORS—I wish to learn through your Cultivator, the manner in which I can use to best advantage as manure, the sediment of oil known as 'oil scraps.' I have thought that by making compost with that, swamp muck, and barn yard manure, it would be most valuable; but from the exceedingly heating nature of it, I have feared to make any application, without some advice as to preparation and quantity. Would coarse beach sand, or the coal and wood cinders, or coarse ashes from the furnaces of engines, or ground plaster, be useful in qualifying it? A SUBSCRIBER."

Coxton, Essex co. N. J.

The substance named by our correspondent, is a valuable manure, whether mixed with muck, or stable manure, or applied directly to the soil. In the latter case, care would be necessary not to use it too liberally, for its stimulating properties are felt by plants most powerfully. Dr. Dana says—"All fats and oils give off a great quantity of carbonic acid, and end by becoming acids. As their ultimate elements are the same as those of plants, it may be inferred, that under the influence of growing plants, fats and oils are decomposed, and become vegetable food. But there is another action of fats and oils on silicates; they not only let loose the alkali of silicates by the carbonic acid they evolve, but the oils now become acids, immediately combine with this alkali, and imperfect soaps are formed. Soaps are truly chemical salts." Coal and wood cinders, or coarse ashes, are excellent for mixing with swamp muck for composts, but if stable manures are used in the same mass, they are better if kept separate from the ashes by a layer of muck. Plaster may be used advantageously with the oil sediment, or with the composts. We think that were plaster used sufficiently to dry the oil sediment, and then sowed in drills with roots, or broadcast on crops or grass, the effect would be excellent. Perhaps some of our readers have experimented with this oil scrap or foots; if so, we should be pleased to learn from them the results.

TAN BARK.

MR. J. W. A. SAUNDERS of Buckingham co., Va., in a communication to us, says—"I have one important inquiry to make, and that is whether tan can be converted into manures? and whether Bommer's patent would have the same effect in its decomposition as on other substances? If so, it would be of great value to me, and I should like to obtain a patent. I have a pile of tan from the bark used in my tannery for ten years, at an average of 70 cords a year, or 700 cords. I have tried the well rotted tan as a top dressing on clover and small grain, and find it of some value, and intend using it extensively in that way hereafter, if you or some of your correspondents cannot aid my views of rendering it more valuable in some other form."

We have never used tan as a manure ourselves, nor are we aware of any instance where its value has been satisfactorily tested. In an early volume of the N. Y. Farmer, an instance is given, in which it was said to have proved highly valuable when made into compost. It has also been used with some success in smelting the condition of heavy clay soils. The tannin or astringent principle contained in bark, has been supposed to be injurious to plants, and when furnished in too large quantities would doubtless prove so. But when decomposed, this matter must be lost, and the remainder the same as any decayed wood or other vegetable matter, and subject to the same laws. We do not know whether Mr. Bommer has ever submitted this substance to his peculiar process of decomposition, but should think there could be no doubt as to the result. In one respect, tan, fresh from the pits, would be superior to most articles submitted by him to decomposition. It contains more or less lime and animal matter, which would so far further the operation or render the compost more useful. Perhaps Mr. Bommer can enlighten us on this topic; if so, we should be pleased to hear from him, as would doubtless many of our readers, who as well as Mr. S. have large quantities of tan they would be glad to convert into manure.

SUGAR FROM CORN.

We have received a great number of inquiries from different parts of our country, on the subject of manufacturing sugar from Indian corn, of which the following will embrace all the essential points, and to which we shall give as full a reply as the present condition of the manufacture will admit.

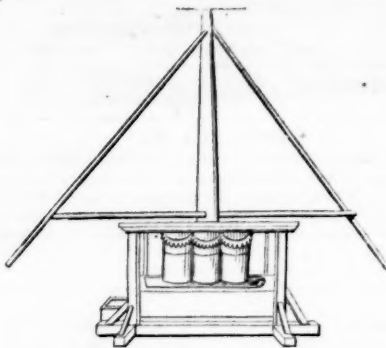
1. What is the best method of growing corn intended for making sugar?
 2. Time of gathering and preparation for grinding?
 3. Machinery for the manufacture?
 4. Process of boiling, and granulation of the sugar?
1. In planting corn for sugar, two objects must be kept in view—the securing the greatest growth of stalks; and the prevention of the formation of ears. The kind of soil required for a great growth of corn, is so well known that it is unnecessary to describe it here. It must be rich, and should be friable, that it may be cultivated easily. A heavy clover lay, manured, and then turned over, rolled, and the surface harrowed fine, makes a good soil for a corn crop. Mr. Webb, the most successful

manufacturer of sugar thus far, directs that the corn be drilled in rows north and south, that the influence of the sun may be felt as much as possible, the rows to be two and a half feet apart, and the plants in the rows not more than two or three inches apart. This thick planting on a rich soil gives a great stand of corn, and in considerable degree prevents the formation of ears, as ears cannot be expected where the corn is as thick as is here directed. Mr. Blake of Indianapolis, made an extensive experiment last year, and from 4½ acres produced about 280 gallons of excellent molasses. He planted his corn, or rather drilled it in rows four feet apart, plants close set in the rows, but distance not stated. It is probable in planting corn for sugar, something should depend on the variety selected; as it is evident the smaller northern kinds would require closer planting than the tall southern or western kinds. We have not learned that any experiments have been instituted to test the comparative value of the several varieties of corn for sugar; though it is certain that large stalks yield more juice than small ones, in proportion to their size.

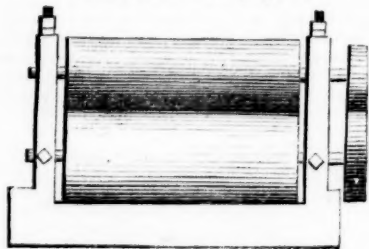
2. Theory indicated that a large portion of the sugar in the cornstalk would be lost, if ears were allowed to form; and experiments demonstrated that such was the case. Where corn is planted thick no ears will form, or only small and imperfect ones. If ears form, they must be broken or cut off; not too early, as their tenderness greatly increases the labor required. Any time previous to the formation of the grain on the cob will be soon enough. When the stalk is fully matured, or ripe, the process of cutting off the tops or the blossom part, and stripping off the leaves, must be performed. The early northern kinds will be fit for stripping in August, the later kinds will continue to ripen until in September or October, or until killed by the frosts. The tops and blades must be secured for fodder, of which they make the best quality. When topped and stripped, the stalks are cut up by the bottom, close to the ground, bound in bundles, and taken to the mill for grinding. It is found by experience that the corn can be topped and stripped much more rapidly on the hill, than if cut up previous to those operations. If the tops and leaves are not taken off, a quantity of the juice will be lost, and the formation of sugar rendered more difficult.

3. The machinery required for the manufacture of corn stalk sugar is the same in effect as that used in making cane sugar. It was at first supposed that wood cylinders might be used for the corn stalk, instead of the iron ones requisite for the cane, and all the experiments hitherto made, have been in mills of this kind. Experience shows, however, that iron mills must be used, it requiring more hardness and firmness than wood possesses to operate successfully for any length of time. We give the figures of two mills for grinding corn or cane, one upright, and the other horizontal. The first (fig. 29,) is a figure of the mill used by Mr. Webb and others, the past season, and is of wood, worked by horses. The other mill is of iron, and may be worked by water, steam or horse power. Mr. Webb describes the first mill as follows: "It may be made with three upright wooden rollers, from 20 to 40 inches in length, turned so as to run true, and fitted into a strong frame work, consisting of two horizontal pieces, sustained by uprights. These pieces are morticed to admit wedges on each side of the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of wood work called the dumb returner, which directs them backwards, so that they pass through the rollers again on the left side of the middle one." The arms and braces used when the mill is worked by cattle or horses, are seen in the engraving. The iron mill (figs. 30 and 31,) does not differ greatly in principle from the wood one, except that the distance of the side rollers from the central one is regulated by screws, as seen in the engraving, and that when propelled by animal power, the upper roller is turned by cogs at one end, moved by others on a vertical shaft. The iron mills are the most expensive in the outset, but they are the most durable, less liable to get out of order, and separate the juice from the stalk much more perfectly than the wood mill. The experiments of Mr. Webb, the past season, from which so much was justly anticipated, failed in a great measure in consequence of his mill giving way on the second day of its use. Mr. Blake, whose well conducted experiment we have before noticed, used a wood mill, and found that a large part of the juice was lost, by the surface of the rollers soon becoming uneven, and not pressing the stalk properly. It is probable, therefore, that iron mills will be found the most economical in the end, and there is no necessity for their being very expensive. In both cases the rollers must move in or over reservoirs for the receiving the juice as it flows from the corn stalk.

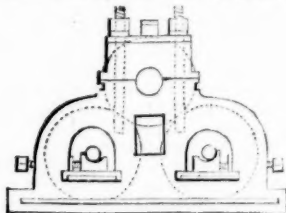
4. We have not known, or heard of a single instance, where the attempt to manufacture sugar, or rather syrup from the juice, has failed. The valuable Report of Mr. Ellsworth, contains statements from all parts of the country, of the success which has attended the conversion of juice into syrup, but the instances were comparatively few in which the granulation of the syrup, or its conversion into sugar, was effected. In this, we apprehend, the greatest obstacle to the manufacture will be found. The simple fact, however, that such conversion has been repeatedly effected, shows there is nothing but experience and skill wanted to insure such a result at all times. When the manufacture of beet root sugar first commenced



Mr. Webb's Mill.—(Fig. 29.)



Side View of Iron Mill.—(Fig. 30.)



End View of Iron Mill.—(Fig. 31.)

in France, granulation of the syrup was almost impossible; now the process is as certain and effectual as in the case of the cane or the maple. The great source of the difficulty seems to arise from the rapidity with which the juice passes into a state of partial fermentation, rendering its immediate reduction after extraction, indispensable. Beet root juice ferments immediately after it is pressed out, and it is said that in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Mr. Webb kept some corn juice for an hour without injury; but a great variety of experiments prove that it should be boiled as soon as possible. We give from a letter of Mr. Webb's, the following account of his process, because it is the result of practice rather than theory, he having made a beautiful sugar for two years by the process:

"The juice, after coming from the mill, stood for a short time to deposit some of its coarser impurities. It was then poured off and passed through a flannel strainer, to get rid of such matters as could be separated in that way. Lime water, called milk of lime, was then added in the proportion of one or two table spoonfuls to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from having too much or too little of the lime. A certain portion of this substance is doubtless necessary, and more or less than this will be injurious; but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed—taking care to complete this operation before boiling commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined from time to time, and if there was any appearance of feculent particles, which would not rise to the surface, it was again passed through the flannel strainer. In judging when the syrup is sufficiently boiled, a portion was taken between the thumb and finger, and if, when moderately cool, a thread half an inch long could be drawn, it was considered done, and poured into broad shallow vessels to crystallize. In some cases, crystallization commenced in 12 hours, in others not till after several days."

The following is a condensed view of the directions given by Prof. Mapes of New-York, a gentleman who has paid much attention to the subject. The stalks (cane or corn,) to be cut as ripe as possible, but before any acetic acid is formed; litmus paper will turn red if any acid is present. Express the juice without loss of time, as every moment after cutting will deteriorate its quality. Clear lime water, 1 quart to 100 gallons of juice, to be added as soon as expressed, unless the juice shows acid with the litmus paper, when the lime is to be omitted, and a solution of sal. soda, or soda ash, added till it is precisely neutral. In this state, the juice must be evaporated in such an apparatus as to finish its charge in 30 minutes. Unless boiled quick, good crystallization is not to be expected. The time occupied from the cut-

ting to the finishing the boiling, should not exceed one hour. To know when boiled enough, use Fahrenheit's Thermometer; 239° or 246° is the proper point. The instant a charge is finished, it must be thrown into a cooler large enough to contain several charges. The second charge, and so for each one, must be mixed with the preceding, by gently stirring, but no more stirring should be used than is necessary, as it will be injurious. When all is boiled, let the mass cool to 175° and then fill the sugar molds, which should hold not less than 14 galls. There must be a plug at the bottom of the mold to allow the molasses to escape.

One of the most important steps in the process, and which is essential to the formation of sugar, is quick boiling. Long boiling renders the syrup dark, and prevents granulation. Mr. Webb, the last year, found it necessary to discard his former deep boilers, and substitute broad shallow vessels, in which the evaporation would proceed rapidly. The sugar made in this way, is of a finer quality than that made by longer boiling, and the crystallization is more perfect and certain. Syrup, however, made by quick boiling, as directed by Mr. Mapes, retains more of the peculiar taste of the corn stalk, than when boiled for a longer time. The sugar is free from this flavor, and Mr. Webb, to remove it from the molasses, recommends, after it is drained from the sugar, to dilute it with water, and boil it until this taste is lost. It is very probable, we think, that as the subject is farther investigated, and science is brought more efficiently to the aid of the manufacturer, that the little obstacles impeding progress will disappear, as they have done in many other cases already. Where failures in the formation of sugar have occurred, (every attempt to make molasses has succeeded,) they can easily be traced to the imperfections of the machinery, or the inexperience of the manufacturer, and will not be liable to again occur. There is scarcely room for doubt that a vast and profitable manufacture is opening upon the country, particularly the corn regions of the west and south; and there is every indication that the great importation of foreign sugars will soon cease, if not be changed to exportation.

USE OF POUDRETTE.

"I see by an advertisement in the last No. of the Cultivator, that the article of poudrrette can be had in New-York, and at other times have seen a good deal said about its fertilizing effects; but I do not recollect to have seen anywhere, an account of the proper mode of using it upon the crops. I should be pleased, if you are in possession of information in regard to the use of this manure, of answers to the following queries: When is the proper time to apply it to corn?—when planting, or after it has come up?—and what quantity per hill? The best method of using it on the wheat crop; whether when seeding, or broadcast; if the latter, at what time, and how much per acre? If used broadcast, will it have the effect to hasten the ripening of the crop like yard or stable manure, or retard it like plaster? J. H."

Harrisonburg, Va., 1843.

Poudrrette is usually applied to corn at the time of planting, and the quantity recommended is, from half a gill to a gill in each hill, to be dropped upon the corn, and covered at the proper depth.

On wheat it is sown broadcast, though if the wheat was drilled, the poudrrette might be deposited at the same time, and by the same machine. Experiments have been made, in which from 15 to 70 bushels per acre have been used, and the best results have been obtained when the quantity applied was from 25 to 35 bushels per acre. Its effect on crops is the same as that of rich stable manure; applied too liberally to grain crops, it causes them to lodge in the same manner as other animal manures.

BEEES.

"EDITORS OF THE CULTIVATOR—Some of your subscribers in this place have lost many of their bees, in the syrup of the confectioner. Some large swarms have been nearly ruined. They resort to these places by thousands, and but few return to their hive. Can you suggest a remedy? The occupants of the shop cannot work without a free circulation of air. Millinet has been used to keep the bees out, but it makes the air insufferably close. Would wire gauze answer a good purpose? If in your next number you can suggest any remedy for an obstacle more fatal in this place to the cultivation of bees, than all others, you will very much oblige. A SUBSCRIBER."

Greenfield, Mass., 1843.

We have seen flies, bees, wasps, &c. excluded from rooms, by placing before the windows the perforated plates of tin from the buttonmaker's shops; and we have also known screens made of fine wire, used successfully for the same purpose. We have seen it stated as a singular fact in natural history, that flies, bees, &c. are effectually excluded by a wire gauze screen, even when the meshes were of a size to permit a free passage, if the protected window or passage, was not fronted by another open window or passage the light of which corresponded to the protected one. We should place more dependence on wire screens, than any other mode of prevention, as they would obstruct the air less, and may be woven so as to effectually exclude the bee. Care should be taken from the first, to allow no bees to get a taste of the sweets; since if this is once done, their exclusion will be ten fold more difficult.

NEW-YORK STATE AG. SOCIETY.

At the regular meeting of the Executive Committee of the New-York State Ag. Society, at the Geological Hall, on the 2d Wednesday of March, the following members were present: Messrs. Denniston, Leland, Prentice, Tucker, Walsh, M'Intyre, Bement and Hillhouse—Vice President Leland in the chair.

The Annual Report to the Legislature, embracing the Transactions of the State and County Agricultural Societies, so far as the latter have reported, was presented, and after examination, which occupied most of the time of the meeting, were approved, and directed to be transmitted to the Legislature, by Vice President Denniston of the Senate.

The committee appointed at a previous meeting to procure a room for the use of the Society in the old State Hall, reported that they had called on the Commissioners of the Land Office, who informed them that it would be necessary to apply to the Legislature, to effect the object desired. It was thereupon resolved, that Vice President Leland be a committee to procure the passage of a concurrent resolution by the Legislature, authorizing the Commissioners of the Land Office to fit up a room for the use of the Society.

The Annual Report of the State Society, above alluded to, was presented to the Senate on the 9th of March, and on motion of Mr. Dickinson, chairman of the Committee on Agriculture, ten times the usual number, together with 500 copies for the State Ag. Society, and twenty copies for each County Ag. Society, were ordered printed. The vol. will be ready for distribution by the middle of this month. County Societies can have their twenty copies sent them, bound in the same style as the vol. of Transactions for last year, by remitting \$5.00 to pay for the binding, to LUTHER TUCKER, Secretary, Albany.

CATTLE SHOWS THIS YEAR.

THE Onondaga Co. Ag. Society is the first in the field with its list of premiums to be awarded this year. The Fair is to be held at Syracuse, October 4, 5. In addition to the usual list of premiums, Mr. FULLER, the President, offers three premiums of \$5.00 each, for the best conducted experiments to test the value of lime, plaster, and salt, as manures. Wm. Fuller, Skaneateles, President, and Enoch Marks, Navarino, Cor. Sec'y.

The Chautauque Co. Society have also issued their premium list. Their Fair is to be held at Fredonia, Sept. 29, 30. T. B. Campbell, Westfield, President, and Mr. Risley, Fredonia, Sec'y.

The Oneida Ag. Society have also issued their list of premiums, to be awarded at the next Fair, which is to be held at Vernon—time not fixed. Benj. P. Johnson, Rome, President, and Elon Comstock, Rome, Cor. Sec'y.

SPRING WHEAT.

THERE is a very large part of the United States not suitable to the production of winter wheat, or where it at best is but an uncertain crop, in which spring wheat is a very certain, and in most cases a productive one. This arises in a great degree from the severity of our winters, the frosts of which alternating with the thaws of spring, lift the fall sown wheat from the ground, and cause the death of the plant. This is particularly the case, where from the abundance of clay in the soil, it is disposed to be retentive of moisture as well as heavy in working. There can be little doubt that in all parts of the country favorable to winter wheat, that grain will continue to be grown in preference to spring wheat; it is more productive, and makes a finer flour, two causes sufficient to insure a preference; but spring wheat makes excellent bread, and besides the plant escapes the hazards of our winters, which is enough to insure an extensive culture.

Spring wheat requires a soil rich and in good condition, not so much from the recent application of manures, as from a series of good treatment. Like all the other grain crops, if recent or fresh manure is applied liberally to the soil as a preparative for the crop, it is most likely to prove injurious, giving a greater growth to the straw than to the ear, and rendering it so weak as almost to insure an attack of the rust, or its lodging in the field. It is a good plan to apply manures to a crop of corn or roots, and let spring wheat follow these. Thoroughly rotted manures, or compost, however, may be applied directly to the wheat crop.

Spring wheat should be sown early. We have hardly ever known a good, or even an ordinary crop produced, where this was neglected. Early sowing favors early maturity, and thus avoids the danger of mildew or rust, to which this grain, if sown late, is very liable. It also enables the plant to throw up its ears, and prepare the juices necessary for the perfection of the berry, before the extreme heats of summer deprive the plants of the moisture necessary for this purpose.

It is from this necessity of having the soil early prepared for spring wheat, that it becomes desirable very frequently, to have the fields on which it is to be sown, plowed in the fall. If the soil is free from surface water, (and no soil on which water stands is fit for a crop,) fall plowed lands are seen in the early spring, to present a surface finely pulverized by the action of frost, and fit for the reception of seed much earlier than they could otherwise be. We have seen beautiful crops of spring wheat grown after corn or potatoes that had been well manured, and after the crops were gathered late in the

fall, well and deeply plowed for the spring crop. A rich dry seed bed was thus ready for the seed wheat early in the season, long before a plowing could have taken place that would have left the soil in a fit condition for a crop. It is as necessary to secure good seed for spring, as for winter or fall sowing, and the preparation of it by bringing and liming, should never in any instance be omitted.

RUFFIN'S ESSAY ON CALCAREOUS MANURES.

WE noticed in our last, the reception of the third edition of this valuable work from the respected author; but we cannot resist the desire to again call the attention of our readers to it, in the hope that they will secure a copy for themselves, as it is printed in a form that allows of its transmission by mail. We prize this work highly, as independent of the great truths it discloses in regard to the use of calcareous manures, it stands as the first original American work on agricultural science, and one which has rarely been equaled in the value of its suggestions in any country. Its publication constitutes a new era in southern agriculture; the immense marl beds, as well as those of green sand, that underlie so large a proportion of the tide waters of the south, have been brought into profitable notice and use by it; and the importance of calcareous manures established beyond doubt. Dr. Dana has done for muck, or vegetable matter, what Mr. Ruffin has done for lime; and as Americans, we feel proud that the two best works that have yet appeared on these subjects are from the pens of our own citizens. We are glad that they are both receiving so much notice; and heartily concur in the propositions that have been made in various quarters, to have them extensively used as minor premiums, by our Agricultural Societies.

SEED STORES AND AG. REPOSITORIES.

FARMERS, encourage your seed stores and repositories of Agricultural implements by visiting and giving them your support. The difference of profit between crops grown from seeds of prime quality, or from inferior ones, is not duly estimated. So with Implements. The ease of working, the rapidity of execution, and the saving of time in using good implements, should induce every farmer, when purchase is necessary, to provide himself with the best. So with the dairyman. How much hard labor might he save his wife or his dairy-maids, if he would substitute some of the modern implements for churning and working over his butter, for the old fashioned ones he continues to employ. We are aware that complaints are made of seedsmen, and perhaps in a few instances justly, that deceptions are used, that the article sold is not always what it is said to be, that old seeds or damaged ones are mixed with the new, &c. &c. And we are also aware that in nine cases out of ten, where seeds turn out differently from what was expected, or fail to vegetate, the fault is with the purchaser rather than the vender. Complaints of the kind named, have been much less frequent of late than formerly; and if farmers will only be careful to mark those who willfully deceive in this matter, there will soon be an end of collusion. The greatest fault found with our Agricultural implements, and the defect is urged against nearly all of them, is, that they are too slightly made to endure the labor expected from them. They are consequently liable to break, or get out of repair; circumstances not likely to increase the good humor of the farmer when such accidents occur, as they are most likely to do, at the most hurrying times. We think our mechanics in general, would do well to take this matter of strength and firmness in their construction into consideration, as going far to establish the reputation of the implements made by them.

AGRICULTURAL PAPERS IN NEW-ENGLAND.

MAINE.—The Eastern Farmer, published at Portland during the last year, and edited by F. O. J. Smith, Esq., has been united with the Maine Farmer and Mechanic's Advocate at Winthrop, edited by Dr. E. Holmes. The consolidated paper is to be edited by Messrs. H. and S., and to be published at Portland and Winthrop. It is a large and well filled folio sheet at \$2.00 a year. The Maine Cultivator, a weekly folio sheet, is continued at Hallowell, by Mr. Lincoln; and the Gospel Banner, published at Augusta, by Rev. Mr. Drew, devotes a page to Agricultural matters, under the head of "The Plow Boy."

NEW HAMPSHIRE.—In this State, the Farmer's Monthly Visitor, conducted by Gov. Hill, is continued at Concord, and is the only Agricultural paper we believe in the State. The new vol. commencing with the present year, is published at the low price of 50 cents.

IN MASSACHUSETTS, we have, first the New-England Farmer, the oldest paper of the kind in the Union. It is now in its 21st year, and has been continued from its commencement in the same form and style, a handsome quarto, weekly at \$2.00 a year. It is edited by the Rev. Allen Putnam, under whose superintendence its high reputation has been well sustained. 2. The Boston Cultivator, a weekly quarto sheet, by Otis Brewer. 3. The Massachusetts Plowman, at Boston, by Wm. Buckminster, Esq., a large folio sheet, weekly. 4. The Farmer's Journal, Boston, monthly, at 50 cents, by Mr. S. W. Cole, the former editor of the Yankee Farmer, which was united with the Plowman. 5. The Berkshire Farmer, at Pittsfield, by Wm. Bacon, Esq., monthly, at

50 cents a year. 6. The Farmer's Advocate, by H. C. Merriam, Esq., editor of the Boston Cultivator for the last year. This is a large and well filled folio, weekly, at \$2.50 a year. If the farmers of Massachusetts do not pursue their business in the most approved manner, it will not be because the information necessary is not placed within their reach.

CONNECTICUT has but one Agricultural paper, the Farmers Gazette, at New-Haven, semi-monthly, 16 pages octavo, at \$1.00 a year. Joseph Wood, Editor.

EXTRAORDINARY PIGS.

OUR thanks are due Dr. C. for the following account of the pigs fattened by him in 1842. We do not now recollect another instance in which a pig of 20 months has reached 700 lbs.; and the gain on raw apples adds another case in proof of the value of this fruit for feeding pigs. We fully concur with the Dr. that fermented food is to be preferred for fattening swine, and that the less exercise they take, or the more restricted their range, the more rapidly will they take on fat.

To W. GAYLORD, Esq.—Your note of the 16th, making some inquiries touching the breed of my hogs, mode and time of fattening, and the kind of food used for this purpose, was duly received. In replying, I fear I shall not be able to communicate such information as will be satisfactory to you on all the points on which you request it.

Of the breed of the two smallest, I know nothing, as I bought them last spring, when about a year old, of a person who has since moved out of the country. I understood, however, from him at the time that they were of an improved breed. They weighed at that time (April) about two hundred pounds each. The largest of my fattened pigs was of a cross between the Berkshire breed and a kind known in this vicinity as the Saratoga breed, from their having first been introduced here from that county. They are entirely white, very handsome, and though rather large boned, keep and fat easier than any breed of hogs I ever saw. I have been informed—how correctly I cannot say—that their true name is the Russia breed.

There was no particular care or pains taken of the one I slaughtered, the first season. He was kept for a boar until about a year old. He was wintered entirely on raw apples, principally sour ones; and on this food, gained from 160 lbs., which he weighed in November, to 300 lbs., which he reached in April. He was then altered, and put up in a pen with the other two hogs, where they remained until they were killed in the latter part of January last. They were from 19 to 20 months old, and weighed respectively—704 lbs.—578 lbs.—410 lbs.

Their only food, from April to September, was boiled potatoes and buttermilk, mixed and fermented. In September, I mixed into this food ten bushels of ground peas; after this, until they were killed, their food consisted of barley meal, mixed with milk and water, and suffered to stand until sour. Of this they had all they would eat.

Their pen was some 12 by 15 feet, a partition running across the middle, with a door-way, and half of it roofed over. In the covered part was the trough. They were never suffered to run out into a yard, a mode many prefer. I have been many years of opinion that hogs will fat faster and cheaper under a system of close confinement and fermented food, than in any other way. Should you deem the foregoing statements such as would interest the readers of the Cultivator, they are at your service.

W. F. COOPER, M. D.
Kelloggsville, Cayuga co., March, 1843.

SILK CULTURE.—The Report of the New-England Silk Convention, held at Northampton last autumn, affords the most gratifying evidence of the progress of the silk culture in various sections of our country. Mr. D. B. Blakesley of Newark in this state, says that he last year raised 300 lbs. first rate cocoons from one and a half acre of mulberries; the whole expense, including rents and every thing, was \$42.40. He planted five acres to mulberries last year, and will plant another five acres this spring. The progress in Massachusetts will be shown by the fact, that the bounty paid in that state amounted in 1836, to only \$71.37, while in 1842, up to 1st of October, it had risen to \$3,351.91. In 1838, the Society at Economy, Pa., raised 1,400 lbs. cocoons—in 1839, 1,800 lbs.—in 1840, 2,400 lbs.—in 1841, 4,400 lbs.—in 1842, 5,500 lbs. In connection with this subject, we would invite attention to the circular of Messrs. HAYWOOD & Co., of New-York, given on another page of this paper. Judging, and rightly too, that this business would soon be one of importance, they have turned their attention to it with a view of opening a ready market for the raw silk, and of rendering such assistance as may be in their power to its growers, by furnishing information, eggs, reels, &c., which may be depended upon.

"CREDIT."—During the last two months, we have noticed no less than seventy-five articles, in different papers, copied from the Cultivator, without the proper credit. If the omission to credit, has arisen from carelessness, such negligence ought to be corrected. We have already stricken some thirty papers from our exchange list, on this account, and shall have to cut off still more, unless justice in this respect, is done to the Cultivator.

The last Spirit of the Times, brought us a most elegant steel print of Col. Johnson, "the Napoleon of the turf."

THE TIMES.

THAT a singular condition of things is existing in the United States at the present time, is obvious to every one at all acquainted with the affairs of the country. With general health unexampled; with peace uninterrupted; with granaries overflowing; the cry of hard times comes up from every part of our broad country, mingled with complaints, murmurs, and execrations, varied as the causes supposed to produce the evils under which we are suffering. The manufacturer has stopped his spindles, because his sales would hardly procure the oil required by his machinery. The merchant has laid up his ships, because there was no demand for exports, and imports could not be sold. The farmer has stopped his plow, because his granaries are already full, and because his products have fallen so low that the prices will not pay the cost of production. There are thousands of respectable farmers in our country, whose crops the last year were good, that find themselves on the wrong side of the balance sheet, after wages, taxes, and wear and tear are deducted. These are facts, and they are serious ones; the causes of this state of things are not so obvious. The evil all admit, the remedy varies with the individual; but almost every one has his panacea for all the ills of the body politic. With some, the enactments of high protective tariffs would form an infallible cure; while others deem their total repeal all that is needed to insure prosperity. There are some who consider a national bank indispensable to relief; while others argue most vehemently that all our troubles may be traced to the existence in past years of such an institution. There are those who assert that all is wrong because the state banks will not "shell out;" while there are others who argue as earnestly, that "shelling out" too liberally lies at the root of all our troubles. Who shall decide, when political economists so widely disagree?

But while there is such a difference of opinion as to some of the causes that have operated so unfavorably, there are others respecting which it would seem there can be little room for dissension. Such a cause, in our view, is the general state of indebtedness, in which the individual, the states, and the government are found. There is no need of quarreling about the cause of this indebtedness now; though we believe there is a fearful responsibility resting on those through whose management this state of things exists. The debt exists, the farmer owes, the mechanic owes, professional men owe, states are bankrupt, and the general government has not escaped the shame or the crime of a debt. "Brethren," said a preacher one day in our hearing, when discoursing on that knottiest of metaphysical subjects, the introduction of sin into the universe—"Brethren, there is no use in spending our time in conjectures as to the manner in which sin came into the universe; it is here, and it is our business to go to work in earnest, and get it out as soon as possible." So with our debts; they are contracted, they are here, and wrangling about them is of no use; the only way is to go to work with steady nerves and strong hands and wipe them out as soon as we can, and then look out for the future.

The great cause of the distress now existing in our country, is to be found in our indebtedness. This is the millstone that hangs on the neck of honest industry, the incubus that chills the life blood and stifles the breath of enterprise. Prices are low, and they must be low in a healthy state of things, while the world remains in its present condition. The millions of Europe have converted their swords into plow shares, and instead of slaughtering one another, are employed in sowing and reaping. As producers multiply, prices must decline, industry will be turned into new channels, and as these are occupied the same results will ensue; the prices of labor will fall, and all things will gradually find their true level. All will see that this would be well enough, were it not for the fact that too many of us owe. And the debts too were contracted in times when the products of the soil were at least 100 per cent higher than they now are. Here is the true secret of the existing distress, the cause of the hard times of which we complain. We must grow two bushels of wheat, or fatten two pigs, or shear two sheep, where it was expected one would be sufficient; for though we might live, and live well, on the products of our farms at present prices, it requires double the labor to pay our debts it formerly did, or would at the time they were contracted.

But it is said by some, there is no necessity of hard times, simply because farm products have declined in price; that there is no necessary connection between low prices in grain, and general distress in a country. This might be true, were it not for our indebtedness; but now the effect is as sure to follow the cause, as night is to succeed day. If the merchant, or the mechanic, expects the farmer to purchase as much of them as formerly, they must be mistaken. Nothing short of the grossest infatuation could induce him to continue his purchases, while his means have lessened one-half. No, the old coat must be neatly brushed and mended; the number of dresses must be reduced to suit the times; the order for the new carriage is countermanded; and the sofa and chairs about which there had been some talk, it is mutually agreed to forget. Thus when the farmer is forced to retrench, the act is felt in every quarter, for he is the great producer, and the great purchaser of the country.

We sometimes hear bitter complaints against the banks, that they do not throw out more paper, that they do not make money more plenty. This is all idle. The banks are able and willing to lend; the difficulty is to find safe borrowers. The Report of the Bank Commissioners of this state, discloses the singular fact, that the specie in

their vaults, actually exceeds the notes of the banks in circulation. In what branch of industry is there any inducement found at this time to draw money from banks? Money literally goes a begging in our cities, and for profitable investments can be had at the lowest rates. Trade is stagnant because the supply exceeds the demand; prices have fallen to the specie standard; and when by patient toil and persevering industry, the producers of wealth have paid their debts and the debts of the states, which must ultimately come from their earnings, times in which less distress will be felt, may be expected. And the times will improve exactly in proportion as this point of freedom from indebtedness is approached. When the springs of industry are freed from what now presses them down with the weight of a mountain, their elastic energy will be seen, and relief in the exact ratio of their expansion, will be the result. There is not the least use or necessity for the farmer's being disheartened. The times may demand prudence and economy; they certainly require energy and industry. The circle of prices do not yet correspond; but when once this point is reached, and matters are fast tending to that point, the man who is free from debt, will encounter no trouble whatever. It is said that bought wit is the best, if not bought too dear. A terrible price this country has paid for the lessons in political economy we have received within a few years past. It remains to be seen, by the use which we make of them, whether the price is too great; but unless we are willing to forget that dreams are not realities; that shadows are not substance; that permanent prosperity cannot be based on bubbles, the times through which we are passing will convey to us no lessons of lasting utility.

AGRICULTURAL ADDRESSES.

WE have before us the Address of Mr. Colman, delivered before the Monroe Ag. Soc., Oct. 26, 1842; an Address before the Cayuga Ag. Soc., January 10th, 1843, by H. S. Randall, Esq.; and the Address before the Clinton co. Ag. Soc., October 25, 1842, by Winslow C. Watson, Esq.

The address of Mr. Watson, is a well timed and powerful appeal to the farmers of Clinton, in which the duties and obligations of the farmer are well delineated, and which abounds in truths which should be well and deeply pondered by every tiller of the soil.

It is unnecessary for us to say that the address of Mr. Randall, is of a very high order. Clothed in his graceful, and sometimes flowery style, the most ordinary topics assume additional interest; and the listener forgets that the talk of the speaker is only of cattle, pigs, or manures. His remarks on the differences between the English and American methods of farming, and the natural causes for such a result, are correct and conclusive. After pointing out some of these causes, such as the different amount of land cultivated, the variation of climate, &c. he adds:—"Another cardinal distinction must exist between the agricultural practices of England and the United States, growing out of the opposite relations which land and labor, stand in to each other, in the two countries. In England, it is the land which requires the great outlay of capital; the labor is comparatively nothing. In our country, the case is precisely reversed; land is cheap, and in many sections, it is to be bought at less than the annual rent of the same quantity of land in England. It is the object then, speaking in general terms, of English agriculture, to obtain the greatest product from a given amount of land—of American, to obtain the greatest product from a given amount of labor."

Mr. Randall's exposition of the prevalent faults in our agriculture, is severe; but no one can deny its truth or necessity. That the most barbarous and indefensible practices do exist among farmers, or at least many of them, is apparent to the most careless observer; and it is only by pointing them out in the deserved language of censure, that we may hope for their correction. His remarks on rotation in crops, on the application of manures, and the cultivation of grain and roots, will commend themselves to the reader. Particularly happy we consider that part of the address, in which he so eloquently urges farmers to be true to themselves, their children, and the country. Mr. Randall is a great admirer, as well as a good judge of animals, and his judicious observations on these, and the necessity and means of improvement, show he has lost none of his enthusiasm in that good cause.

We can assure Mr. Colman, that notwithstanding his implied intimation in his introductory note, that some of his hearers might fancy they remembered Lot's wife, if he will only furnish them with such matter, and in such a manner, they will not stop to ask whether what they hear, are the "same words he said last Sunday." The extended limits of Mr. Colman's address, has enabled him to introduce into it many subjects of great interest, not usually included in such addresses, but which are worthy of a place whenever a suitable opportunity offers for their presentation. We do not know when we have read a paper of this kind with more interest, or one which we should be more happy to have placed in the family of every farmer. His pictures of domestic economy are so complete and life-like, and he holds up the "mirror to nature" with such truth, that we are confident some of his hearers, if not many of them, must have exclaimed with Moliere's cook, "as sure as I am a sinner, he means me." His remarks on neatness and good order in farming, in contrast with that slovenly disorderly method unfortunately too common, will not be read without approval. We have no patience with that class of men, who, when

you urge upon them any improvement; any thing which will add to their comfort or convenience, which will add to the appearance of their dwellings or their farms, meet you with a cold "cant," instead of a hearty "I'll try." The plea of want of time arises from the fact that nothing is done at the time it should be; for nothing is more plain than that work done at the proper period lessens the labor in an astonishing degree. Mr. Colman has placed these matters in a strong light, and one which cannot fail to produce a salutary effect. Nothing is more true than that much of the happiness of life arises from little things, things which, insulated from others, would scarcely be worth notice, but which in their connection, go to form a vast aggregate. The improvement of farms is a topic often dwelt upon; the improvement of the farmer himself, is too commonly overlooked. Let every one who can, procure Mr. Colman's address, and give it a careful reading, and if they do not rise from the perusal wiser men, and better informed as to their agricultural, economical, and social duties, we shall be much mistaken as to the result.

PORK AND LARD OIL.

OF all the new manufactures introduced into the country, there is none which has gone ahead with such a "perfect rush," (to use a favorite western phrase,) as the production of oil from lard, and we know of none which promises more immediately beneficial results. In the great western valley, manufactories are springing up at all the principal points, such as Cincinnati, Louisville, Nashville, St. Louis, Pittsburg, Cleveland, Chicago, Detroit, &c., and two have already been established at Rochester in this state. Already the principal manufacturers count their barrels of oil by tens of thousands, and there is quite as much truth as poetry in the sign of a manufacturer at Pittsburg, over whose door is the representation of two mammoth porkers in the act of devouring a whale.

During the present year, about 245,000 hogs have been killed at Cincinnati; and the number slaughtered at other places has considerably increased. Of the number killed at Cincinnati, about 80,000, according to the most authentic information, have, with the exception of the hams, which are pickled and preserved, been converted into lard at once. Formerly, it was very difficult to try hogs in bulk into lard, without burning or otherwise injuring it so as to make an inferior article; but now, steam has been called to the aid of the manufacturer, and every particle of fat is separated from the meat and the bones, with perfect certainty and ease. A large tub with a double bottom is prepared, the upper one some inches above the other. Into the tub, the hog with the exception of the hams is put, the cover secured, and the steam let in. The fat and the meat fall from the bones, and the lard pours through small holes in the upper bottom, into the space between them, from whence it is drawn for straining and packing. The quantity of lard yielded, where the whole hog is treated for it, will of course depend on the fatness of the animal. It is found by experience, that hogs weighing from 300 to 400 lbs. are the best for trying; the quantity of lard, when well fed, considerably exceeding in proportion that of smaller ones. The per cent, where the hog with the exception of the ham is used, varies from 55 to 65, and some very well fed, and of the China and Berkshire breed, have reached 70. It has been ascertained that where the whole hog is used, the lard contains more oil and less stearine than that made from the leaf or rough fat, and it was not so well adapted for keeping or for transportation as that. This obstacle has been removed by taking from the lard made in this way, about 40 per cent of oil, which leaves the lard of the proper consistency for packing, and of a superior quality.

Some of the manufacturers of lard from the hog, have adopted the practice of skinning the animal before rendering into lard. In this method there is no waste of lard, as all the fat adhering to the skin, is separated from it by a steel scraper, easily. It is then converted into leather, which is excellent for various purposes, such as saddle and harness making, book binding, &c. Where the lard is made by steam, the bones are left in a fine condition for conversion into animal charcoal, which is worth some 2 or 3 cents per pound. It is probable that this substance will prove of as much service, and be in as great demand for the clarification of corn stalk sugar in the west, as is the same material in France, for the making of beet sugar.

HARTFORD CO. AG. TRANSACTIONS FOR 1842.

THE "Transactions" of this spirited Society are before us in the shape of a beautifully printed pamphlet of some 90 pages, containing the Address before the Soc. by Mr. Huntington; the Reports of the several committees; officers of the Society for 1843, &c. &c. We heartily approve of this method of perpetuating the proceedings of such societies, by embodying them in a pamphlet form, as valuable for future reference. We have already mentioned the proceedings of the Society, as deserving of high praise, and have only room to add, that in looking over the Reports we found the following:—"Two extraordinary fleeces of fine wool, unwashed, weighing 16 pounds each, were exhibited by Edward Woodruff of Farmington." We are not aware how much would be lost in washing their fleeces, but unless greater than we imagine, they will, it is believed, not be easily exceeded in the country.

DICTIONARY OF TERMS USED IN Agriculture and its kindred Sciences.

JAUNDICE.—This is a disease which attacks horses and cattle, and sometimes becomes quite intractable and dangerous. It is usually occasioned by some obstruction in the ducts or tubes which convey the bile from the liver to the intestines. These obstructions are generally calculi or gall stones, which in the ox or cow, sometimes accumulate in great numbers; although the disease sometimes arises from an increased flow or altered quality of the bile, while none of these obstructions are present. The disease is easily detected by the yellowness of the eyes and mouth, and of the skin generally; the urine is high colored, and the appetite is impaired. From the color of the urine and the skin, the disease is frequently termed the *Yellows*. Purgatives will be necessary, but in the case of the horse, strong ones are dangerous. Two drams of aloes, and one of calomel, given twice a day, will be as much as can be at all times administered in safety. If the system is inflamed or feverish, bleeding must be resorted to, and there are few cases of jaundice in which it will not be useful. Thin gruel, or slightly warmed water, is best for drink, and carrots or other green food will be beneficial mixed with their ordinary food. In the ox or cow, the disease is more difficult of management, and more frequently proves fatal, than in the horse. Bleeding and purgatives are required; but for the purgative, Epsom salts are to be preferred to any other. Some have recommended as a certain cure for this disease, when taken in season, two ounces of flour of mustard, mixed up with some liquid, and given twice in twenty-four hours. As all animals are more liable to be attacked in the spring, than at other times, it proves that green food of some kind is essential to their health, and it is probable that roots will be one of the most effectual preventives of this disease.

JUICES OF PLANTS.—The proper juice of plants, that which is essential to their growth and nutrition, is the sap, after it has undergone the changes consequent on being received into the circulation of the plant. It seems to be elaborated from the sap, by the vital power of the plant, and hence varies much in different plants. In some it is sweet, as the sugar maple; in others, acid or corrosive, as in the wild parsnip; in others, narcotic, as the poppy, belladonna, &c.; in others, aromatic, as in cinnamon. The color of the proper juices of plants, varies as much as their qualities. In the milkweed it is white, in the periwinkle green, in the celandine yellow, in blood-root or logwood it is red, and in others clear and pure. The medicinal qualities of plants principally reside in their proper juices, of which the balsam and turpentine of the fir and pine, are familiar instances. That there is a proper circulation of the juices of plants, as the result of their organization, although long doubted, seems now to be generally admitted. Indeed, in some plants this current is clearly seen by the microscope, as is exhibited in the plates of Roget's Vegetable Physiology. Such a function in some form, seems necessary, or plants would be unable to free themselves from unnecessary or adventitious matters which are taken up by the sap, as it is clear they do by the process of excretion. Prof. Knight's account of this circulation and its results, is in substance as follows:—When the seed is planted under favorable conditions, moisture is absorbed, and slightly modified by the cotyledons, is conducted to the radicle, which is then developed. But this fluid in the radicle, mingled with that continually taken up from the soil, ascends to the plumule, which now expands, and gives the due preparation to the ascending sap, which is returned in its elaborated state to the tubes of the bark. Through this it descends to the root, forming in its progress new bark, and new alburnum, thus completing the circulation.

KIDNEY BEAN.—(*Phaseolus vulgaris*).—In its native state in India or South America, for it is found in both these places, this plant, of which there are two species and several varieties, is a pole bean, or runner. In cultivation, some varieties lose their disposition to climb, and appear as bush beans, which has caused the bush and runners to be considered as different species. In this country, some variety of this bean is usually cultivated in the field, and for pole and bush beans, no others are known in the garden. In France, the kidney bean, called by the people, '*Haricot*,' from the name of a famous soup made of it, is extensively cultivated; while in England, the Field Bean, (*Vicia faba*), is the one most commonly grown. There are few substances used as food, that are more nutritive than the bean, or that are better deserving of a place in cultivation. For animals, the horse bean may be preferred, and enormous crops of this pulse are sometimes produced. Instances are given of its reaching 60 bushels per acre. For animals, all beans should be made into meal, and fed with cut hay or straw. In this country, beans are cooked for the table, by being baked or made into soups, and furnish one of the most healthful and nutritious dishes known. In this case, experience corroborates analysis, as the following statement, by the chemist Einhoff, will show:

Nutritive matter of beans compared with other grain:		
	Per cent.	Per bushel.
Wheat,	74	47
Rye,	70	39
Barley,	65	33
Oats,	58	23
Beans, (V. F.)	68	45
Peas,	75	49
Beans, (P. V.)	84	54

The same chemist obtained from 3840 parts each of

the *Vicia faba* and *Phaseolus vulgaris*, the following results:

	Horse or Windsor bean.	Kidney or Garden bean.
Starch,	1312	1805
Albumen,	31	851
Mucilage, &c.	1204	799

Both these analyses show the great amount of nutritive matter contained in the bean, particularly the Kidney bean, or *Phaseolus*, and its consequent value as an article of human food.

KILLING ANIMALS.—One great object to be attended to in killing animals, is to free them as perfectly from blood as possible. It makes the flesh better, and lessens the tendency to putrefaction. In England and in the United States, cattle are usually knocked down by a blow on the forehead, which fractures the skull. In Spain, Italy, and Portugal, cattle are killed by a blow from a short sharp knife, immediately behind the base of the horns. This penetrates the spinal marrow, and causes instant death. The bleeding in both cases, must be imperfect, from the sudden suspension of nervous action, although much less so in the first manner than in the last. In consequence of the want of proper bleeding, the beef of the south of Europe, is generally black and bad. The Jews, as a part of their religious ritual, take much care to free the animal from all blood. They butcher cattle by drawing the four feet together, throwing them on their side, drawing the head as far back as possible, and then with a penknife, severing at a blow, all the large blood vessels of the neck. Beef killed in the Jewish mode, is preferred by many, where it can be obtained. There is a most cruel mode of killing practiced by those who furnish the delicate white veal of the London markets. For several days previous to killing, the calf is bled daily, to such an extent as to cause fainting, by which process the red blood is almost exhausted, and but little except a white serous fluid is left. At the time of killing, the calf is suspended by his hind feet, his head is drawn up backwards as far as possible, so that the head as well as the body may be free from blood, and then at a single blow with a knife, the neck is severed, and the little blood remaining is speedily drawn. Butchers, in killing hogs, frequently perform it in a most barbarous and slovenly manner, mangling the throat, and making what are called "bloody pieces," where none are necessary. Man has a right to take the life of animals when required for food, but humanity requires it should always be performed in such a way as to give as little pain as possible.

LAMPAS, or 'lampers,' as most farmers pronounce it, is a difficulty in the roof or palate of a horse's mouth, which prevents his eating except with pain. In a horse, the palate is crossed transversely by bars, and some of the lower ones, or those adjoining the fore teeth, swell, become inflamed, and if they rise higher than the teeth, which in a young horse, or when he is shedding his teeth, they sometimes will, feeding is impossible. It may also arise at any time from a feverish tendency, but most often when taken up from grass, or when he has been overfed. It is the custom with some, when a horse has the lampas, to burn them out with a hot iron; and nearly every blacksmith's shop is furnished with an instrument of torture for this purpose. This is a most barbarous practice, and should never be performed. It tortures the animal to no purpose; and it destroys, by rendering the bars callous and hard, that elasticity and sensibility, so necessary to safety in managing a horse by the bridle. In nine times out of ten the inflammation will subside in a few days of itself, and if it does not, a few mashes, or gentle alterative medicines, will relieve him. If they are severe, a few slight cuts or pricks across the bars with a lancet or knife, will cause the inflammation and swelling to subside; but in all operations about the mouth of the horse, care must be taken not to disturb the principal artery or vein of the palate, unless a full bleeding is intended. At times this difficulty of eating arises from either the grinders or tusks endeavoring to make their way through the integument of the jaw. Examination will show whether this is the case, and if so, a cross cut with a penknife will give immediate relief. Young horses, from the shortness of their teeth, are more subject to the lampas than old ones, but those of all ages are liable to the disease.

LARVÆ.—The insect in one of its stages of existence, between the egg and the perfect insect, is called *larvæ*, a word signifying a mask or covering. To the farmer, the larvæ of insects is of most interest from the losses they occasion him while in this transition state. With a very few exceptions, the larvæ appear in the form of a worm, or caterpillar, and in this state commit the most of their depredations. Thus the wire worm, so destructive to grass and grain, is the larvæ of the *Eletor segetis*; the wheat worm is the larvæ of the fly *Cecidomyia tritici*; the worm which is so destructive to bees, is the larvæ of the moth, *Tinea cerella*; the bot, so destructive to horses, is the larvæ of the *Cæstrus equi*; the worm which causes the plum and cherry to drop prematurely, is the larvæ of a species of *Cæstrus*; the cabbage caterpillar, so ruinous to this plant, is the larvæ of the butterfly, *Papilio brassicæ*; the white grain worm, so destructive in granaries, is the larvæ of the *Tineella granella*; the whitish brown insect that is known as the Hessian fly, and is found at the roots of wheat, is the larvæ of the *Cecidomyia destructor*; the worm which is found in the frontal sinuses of the sheep, and which sometimes penetrates to the brain, causing the staggers and death, is the larvæ of the fly called *Cæstrus oris*; the large white grub with a red head, found in our meadows, and which is sometimes most ruinous to them is the larvæ of the *Me-*

lontha vulgaris, or May bug; and the bacon and cheese skippers, are larvæ of different species of *Musca*.

LEECH, (Hirudo).—An animal belonging to the mollusca, hermaphrodite, and some of the species viviparous. Their principal value arises from their power of sucking blood, hence their common name of *bloodsucker*. Of all the species there are only two employed for medicinal purposes, or are proper for this use; though perhaps all will draw blood in some degree. The numbers used in Europe, are immense, and are principally procured in the south of France, and they form an extensive article of traffic. To the agriculturist, their interest is principally derived from the fact, that to them, is by many attributed the disease called the *bloody murrain*. In dissecting animals that have died with this disease, the leech has been found in several of the viscera, particularly the stomach and liver, and appearances have indicated that the flow of blood from the points where the animal had attached itself, had caused the destruction of the ox or cow. Perhaps too, the fact that animals drinking from muddy pools abounding in leeches, are more frequently attacked than others, may have led to this opinion; but although the leech, from the causes assigned, may be the cause of death, it does not seem probable that the bloody murrain is to be generally attributed to them, as it prevails where no leeches are found. That they are injurious, is, however, a sufficient reason, why farmers should endeavor to secure pure water for the use of their cattle.

LETTUCE, (Lactuca sativa).—This is one of the plants most commonly cultivated for salads in all parts of the world, and more than twenty species of the plant are known. It is sown in the open air in such a manner as to produce successive crops; and it is one of the plants most usually grown in hot beds in the early spring months. Lettuces have been cultivated from the earliest ages, are very conducive to health, and when allowed to head, make the best salad known.

LEGHORN.—This is the name of a manufacture of straw, principally carried on on the banks of the river Arno, in Italy. The variety of wheat cultivated for this purpose in Tuscany, is known as the *Grano marzolino*, a summer wheat with long bearded ears. The seed is sown early, and very thick, and is allowed to stand until the ear is about to shoot forth, when it is pulled, bleached by being spread on the sandy banks of the Arno, the straw between the last joint and the ear selected and assorted, and then sold. This straw is whitened with sulphur, previous to being braided, and also after it is made into the hat. We have seen some hats much resembling the best leghorn, made of the June grass (*Poa pratensis*), of our meadows, but it is less tough and flexible than the braid made from wheat. It has been attempted to cultivate the leghorn variety of wheat in England, but it failed. Were it an object, it might undoubtedly be made to grow in the United States, as our summers much more resemble those of Italy than those of England.

LICE.—(*Pediculus*).—There is scarce an animal that does not nourish, under peculiar circumstances, on its skin, hair, wool, or if a bird, among its feathers, some kind of lice. Some even have more than one, as the horse, where one kind lives in the short hair, and another in the mane. The causes are various which are deemed favorable to the production and increase of these parasites. Domestic animals kept dirty and not curried; filthy unwholesome stables; dirt and sweat allowed to accumulate on the skin, or contact with one already infected, are named as causes. But experience shows that lice prefer animals reduced by hunger, disease, or bad food, and they frequently appear after malignant or inveterate diseases have left the animal weak and debilitated. On the horse, they most generally fix on the mane and tail, but if numerous, spread over the whole animal; on the ox, they are found on all parts; they run over the whole body of the sheep, and swarm on every part of the bodies of swine. Animals attacked, rub off the hair, wool, and even the skin, in their annoyance, and fall away rapidly from the abstraction of blood and juices, and the restless state in which they are kept. For the cure of animals infested, some kind of mercurial ointment is most to be depended upon; though there are vegetable washes, such as a decoction of black hellebore, marsh tea, (*Ledum palustre*), which will kill these vermin. It has been said, where they were not numerous, sifting fine dry sand over the animal, would speedily drive them off. Snuff, or a decoction of tobacco, is also used with success. For cattle, Youatt recommends the common scab ointment of sheep, (one part of strong mercurial ointment and five parts of lard,) as a cure for this disease. If a little of this is well rubbed in, instead of a good deal being spread over the hair, there will be no danger of salivation, and the cure will be speedy. Infected animals should be shut from well ones, both to prevent infection, and the danger of licking where the mercurial ointment has been newly spread. If fowls are provided with a box containing sand, with a considerable portion of ashes, to dust, or roll themselves in, they will not be lousy, or if they become so, such a box will cure them.

MAKING MANURE.—Asa Barton, in the Maine Farmer, says that he converted straw, corn stalks, and potato tops, into good manure in fourteen days, in the spring of 1841, only by heaping them together, and mixing unslacked lime with them. He used six casks of lime, and had fifty loads of good manure. The loads were such as farmers carry, a large half cord to the load.

There are cases, in which a little common sense is of more worth than a great deal of calculation.

Original Papers from Contributors.

GUANO AS A MANURE.

MESSESS. EDITORS—This article, now making a considerable noise in the world, and attracting the attention of agriculturists in Europe and America, was first introduced into the United States in 1830. At that time the writer of this article received a barrel of it, and distributed it to many persons, reserving a small portion for his own use. From an ignorance of the proper application of it, probably, it either destroyed every thing on which it was applied, or produced no effect. So far as the writer heard from those to whom he gave it, one or the other of these effects resulted in every case. Since then it has been occasionally introduced in small parcels, but nothing favorable to its high value has as yet resulted from its use in this country, so far as the writer is aware. But it has not been tried with sufficient care and information of its nature; and therefore no judgment of its value can be formed from any experiment made with it in this country. The object of this paper, therefore, is to lay before American agriculturists all the information at present to be had, of its true character, the materials of which it is composed, and the results of experiments made with it in England.

Baron Humboldt first introduced this article to the notice of Europe. He considered guano as the remains of bird's dung, that has accumulated on the shores of certain islands on the coast of South America, Pacific side, between the 13th and 21st degrees of south latitude, from time immemorial. Its composition, according to Volckel, (the most recent analysis,) is as follows:

Urate of ammonia,	9.
Oxalate of ammonia,	10.6
Oxalate of lime,	7.
Phosphate of ammonia,	6.
Phosphate of magnesia and ammonia, ..	2.6
Sulphate of potash,	5.5
Sulphate of soda,	3.8
Sal ammoniac,	4.2
Phosphate of lime,	14.3
Clay and sand,	4.7
Organic substances not estimated, containing 12 per cent of matter insoluble in water, soluble salts of iron in small quantity, water,	32.3
	100.0

From this analysis, it appears that about one-third of the whole mass of guano is salts, of which ammonia is the base; one-fifth is phosphoric salt, and one-fifth a salt of which lime is the base; and that all the other ingredients, (potash, soda, &c.) are universally considered highly valuable and even necessary ingredients of good soils. But the ammonia, of which so large a portion of guano consists, is the most important of all nutritious salts, on account of the large amount of nitrogen it affords. It is a subject, however, worthy of consideration, whether we cannot obtain all the valuable properties of guano directly from the chemists, in the form of the various salts of which guano is now known to be composed, at less expense than we can guano itself.* A very respectable mercantile house in Baltimore, who have received a moderate quantity of guano for sale, informed the writer that the cost of importation, all charges included, (and including the duty assessed by government of 20 per cent,) was seven cents a pound. This price, it is believed, will effectually prohibit its use in this country, no matter how valuable it may prove to be as a manure; because from two to four hundred weight will be required to the acre, and thus it will cost from \$14 to \$28 per acre, to manure the ground. But if it cost seven cents to import it, of course it must be sold at eight or ten cents to yield a profit to the importer, and of course it will not be imported unless it yield this profit. It is, however, hoped that there is some mistake as to the cost of importation, because it is well known that the article retails in England, at 20 shillings per hundred weight. Of course the profits of the importers and also of the retailers, are added to the cost of importation; and if all these together amount to only four cents and nine-tenths per pound, it is difficult to conceive how the simple cost of importation into this country should be seven cents.

As to the value of guano as manure, all who have published the results of their experiments in England, concur in the opinion that it is very great. The writer of this has searched the agricultural periodicals of Great Britain, published during the last two years, and has not been able to find a single objection as to its high value. On the contrary, all the writers concur in the opinion that it can be very profitably applied as a manure, when it costs twenty shillings a hundred weight.

The manner of applying it in England, appears to have been various. Some mixed it with pulverized charcoal, some with wood ashes, others with seed wheat, oats, or barley. Some sowed it by itself broadcast, others applied it in the drills, hills, &c. Mixing it with pulverized charcoal in the proportion of one measure of guano to three of charcoal, and sowing it broadcast, seems to the writer to be the best plan, unless a watery solution should be preferred. The quantity of guano applied to each acre, was generally two hundred weight; but several experimenters considered that a larger quantity would have yielded more profitably, and the result of experiment

* Artificial guano is regularly advertised for sale in the English agricultural papers, at £16 per ton, which is 25 per cent cheaper than the guano itself.

confirmed the opinion. One writer concluded that eight hundred weight might be applied to the acre with advantage; and that if more were applied, it would injure if not destroy the crop.

There is one striking defect in all the reports above referred to—not one of them describe the kind of soil, whether stiff, sandy, or otherwise, on which their experiments were made. Perhaps they supposed that simply naming the kind of crop grown, would indicate the kind of soil. It might do so in England, but not in this country, where every kind of crop is raised, or at least attempted to be raised, on every kind of soil almost.

The crops to which guano was applied in England, were wheat, rye, barley, oats, turneps, ruta baga, Italian rye grass, clover, hops, and artificial grasses generally. The produce of land manured with it, compared with that on which other manures were applied, was various in comparative amount, but always exceeded that of all other manures. For example, a piece of land was manured with guano at the rate of two cwt. per acre, and another with 18 loads of horse manure per acre, both seeded with barley at the same time. The produce was ten per cent more from guano than from horse manure, and the latter was fifty per cent more costly. Another piece of land was manured, one acre with six cwt. of bone dust, and another with two cwt. of guano, and both seeded in wheat. The product of the bone dust was 36 bushels, that of the guano was 50 bushels one and a half pecks. Another field was divided into four parts, to the first was applied three cwt. per acre of guano, to the second three cwt. of nitrate of soda, to the third twenty tons per acre, of farm yard manure; the fourth was left without manure. The whole was seeded with Italian rye grass, and when harvested, the product was as follows:

Guano yielded,	14 tons, 15 cwt. 26 lbs.
Nitrate of soda,	14 " 13 " 37 "
Farm yard manure,	13 " 2 " 96 "
Without manure,	7 " 0 " 108 "

The above examples are deemed sufficient to afford a fair view of the value ascribed to guano in England, as they may be considered averages of a great number of results. They may be sufficient to induce a trial of the article in this country; for we must not forget that many articles that have received the highest commendation in England, have proved worthless in this country. It is not very easy to find a reason for this, but it is true nevertheless. In nearly all the experiments with guano, the results were very nearly the same as those of nitrate of soda, and in the very extensive one just above given, it will be seen that the effects of the nitrate of soda were very nearly the same as those of guano. Now so far as I have been informed, the application of nitrate of soda as manure, in this country, proved of no value. A friend informed me a few days since, that he had used it extensively, without the slightest beneficial effect. So it appears that what is good manure in one country, may be perfectly inefficient in another. On this subject, I will trouble you again shortly.

GIDEON B. SMITH.

Baltimore, Feb. 13, 1843.

INDIAN CORN.

MESSESS. EDITORS—My corn crop of last year was not so good as in former years, but being resolved to know the quantity per acre, I measured off half an acre—of course the best I could select midway across the field—and had it husked and measured with care. The product of this half acre, was forty-six bushels and a half, and ten quarts of shelled corn; this gives over 93½ bushels per acre. This corn was grown in a young peach orchard, the trees standing at distances of sixteen feet square, and the corn planted two feet eight inches square, making six rows between the rows of trees. Each tree occupied the space for five hills of corn, which are not counted in the measurement, but if added, would make over one hundred bushels per acre.

Your advice last spring for the planting of Indian corn, if I recollect right, was three feet square, or drilled at 3 feet by 18 inches. This advice I presume was given for the state in which you live, as well as to those living in the same latitude east and west. I have planted corn as close as this, in latitude about 34½° north, and with such success, that I would never increase this distance there. Here I plant closer, but as I have never planted corn north of Mason & Dixon's line, it would be objected to, if I should tell you that I would plant in your latitude, two hills upon the same ground you require for one, notwithstanding the admonitions of your correspondent, W. R. P.

Corn should be planted so as to give a covering to the ground, that will keep in check all other growths, when the corn has attained about one-third its matured height; and the experience of nine years assures me, that the ground on which it grows, cannot be disturbed after this height is attained, till maturity, without injury to the plant.

My reasons for close planting are adduced from practice, and are these: that I get as large ears as when planted wider, more of them, my field is free from weeds, the crop requires less work, and I have a greater amount of fodder for my farm stock.

There is no diminution in the product of seed or fruit, from working a plant till the secretions necessary for the production of seed, are about being deposited in the plant.

Experiment confirms to me, that if the primitive roots, of such corn as I plant, (a variety of gourd seed,) are injured before the lower leaves upon the stalk have lost their succulency, a sucker is produced from the crown of the root; but I have never been able to produce a suck-

er, by such means as I have tried, after the fourth leaf upon the stalk had lost its softness and became firm, at which time the stalk will have attained about one-third of its matured height. At this stage of growth, I suppose the generant vessels are actively employed; and matter is forming and depositing for seed; but where and how the generant organs are situated in the corn plant, I will not undertake to determine; but I will venture to say, affirmatively, (and this information I presume will not be "supererogatory" to one of your readers,) that they are not to be found, either in the tassel or silk, the tassel being the conduit, and the silk the recipient for the farina.

Before the peach tree comes into full bearing, but little injury arises from disturbing or displacing the radicles with the plow; but after they have come into full bearing, an injury to the roots produces disease in this tree; and if the soil upon which it stands does not contain abundance of food for this plant, the leaves turn yellow, and often, if not always, a number of short sickly looking sprouts make their appearance upon the main stem of the tree or branches; and after this unsuccessful effort of nature to overcome the injury, the tree dies.

By pulling the leaves off the corn plant, (below where the ear is placed upon the stalk,) and while in their succulent state, no seed is made upon the stalk; but if the leaf is permitted to become firm and hard, before it is pulled, little or no diminution takes place in the product of grain. The same thing occurs in the peach tree, the summer growth of leaves being pulled in their succulent state, no fruit is obtained the succeeding year.

Last year I selected two hills of Indian corn, standing two feet six inches apart; the leaves were stripped off the first, it being the outside hill, when grown to their full size, or nearly so, and before they had lost their succulency, pulling one at a time, till I came to where I supposed the shoot for the ear would put forth on the stalk. The result of this experiment, was a large husk without any grain. The other hill was left till the leaves had lost their softness and become hard, pulling one at a time, each as it became hard, till the height of the ear was attained. In this experiment I could perceive no difference in grain, the ear being as full, and as large, as those standing near it, and where the leaves were not disturbed.

These, and other experiments and observations, have induced me to think that the new fibrous roots thrown out from the injured radicle, took up and carried matter for the first wants of a young plant. Whether this matter is the same as the ligneous sap in the more matured plant, I do not now propose to inquire; but if it will bear a comparison with the first and after wants of the animal creation, then we are to infer that the pabulum necessary for the young plant, is somewhat different from that required at a later period of its growth. If it is dissimilar, and I have reason to believe it so, then the plant at an advanced age, may not be in a condition to receive this new sap, and thus cause disease in several ways. The vital principle may be too weak to reject it, and this sap may communicate with the fluids necessary at this matured state of growth, and produce a chemical change in the fluids; or this new product of sappy matter may produce disease by a change in its own constituency, for want of elaboration by the other parts of the plant; or the new succiferous roots with the parent radicle, for want of equilibrium action, may go into decay, and communicate disease in this way to the whole plant, &c. I am aware of many objections to this theory, and possibly the strongest are, that trees are making new wood throughout the summer, and that our fruit trees are making wood and fruit at the same time, and that disease attacks them where the roots are not disturbed by the cultivator of the soil. I would have it borne in mind, that preparation for wood and fruit in perennials, is made the previous year. An orchard standing upon a subsoil of stiff clay, the land therein being plowed, produces no fruit of any consequence the succeeding year; but if the soil in an orchard is light, and will permit the roots to run deeper, so as to be, comparatively with the above case, out of the way of the plow, a tolerable crop may be expected the next year. In orchards that are worked with the plow, after they begin to produce fruit, we find that those standing upon sandy soils are most prolific. The practice of plowing orchards after they have begun to bear full crops of fruit, is objected to by me, as producing the effects above stated—so do I suppose my views to compare with Mr. Comstock's proposed new system—and I might say the injury done to the trees, by cropping the ground necessary for their support, was the cause for the principal part of all their diseases; but as it is not my intention, at present, to adduce any reasoning upon the theory started above, and as I may have something to say about orchards at some future time, I will conclude by saying that I have experiments making for my own satisfaction in regard to this subject. With much respect, your friend,

LYTTLETON PHYSICK.

Ararat Farm, Cecil co. Md., Feb. 5, 1843.

"DIG ABOUT, AND DUNG IT."—This direction was given many centuries ago, and has often been repeated, and perhaps I may say, as often forgotten or neglected. Last summer, I took particular care to apply the above to some young pear trees. One was a graft, of a year's growth, on a stock of several years standing. The ground was loosened for some distance about the tree, perhaps a dozen times during the season. From a single stem, of three feet, the new growth measures 30 feet. The effect on all, was very obvious.

G. BUTLER.

Clinton, N. Y. Feb. 1843.

AN IMPROVED CULTIVATOR.

Messrs. Editors—My object at this time, is to give you and your readers, a general idea of a cultivator which I had made last summer. So far as it was tried, it worked well. Farmers who examined it, pronounced the plan a good one, and our Agricultural Society honored it with a premium last fall.

The teeth are three, of cast iron, the forward one something like a double mold-board plow, and cutting 12 inches; the back teeth like ordinary plows, one turning the earth to the right, the other to the left, each cutting 8 inches. They are shaped rather flat, so as not to make much of a furrow. The frame is so constructed as to allow a space to be worked of any width from 18 to 36 inches. It is triangular, and when contracted is two feet wide. To describe it minutely, would require a drawing and perhaps take up too much room.

If any one should desire it, however, I will give a complete description of the whole implement.

In dressing out the crop the first time, the side teeth are set so as to turn the soil from the row. For the second, they are usually changed, and throw to the row.

The advantages of this over the common cultivator, are, that it works the whole surface, and does it much more thoroughly, especially on rough land. Over the plow, it has the advantage of doing at once going through, what with the plow requires twice; and of leaving land more level, and I think, in better order every way. Not having seen Mr. Langdon's cultivator, I cannot compare the two. Still, I am of opinion that mine possesses two qualities which his does not; that of being easily adapted to different widths, and that of throwing the soil either to or from the row.

The idea occurs to me, that I may be exposing my ignorance in claiming this as a new invention, and that possibly I may be encroaching on some patent. If the former should prove true, I have only to submit to the mortification I would feel, with the best grace I may; if the latter, I hope the party aggrieved will give me an opportunity to repair all damage, before subjecting me to any very severe penalty. Respectfully yours,
Bath, Steuben co., Feb. 18, 1843. GEO. EDWARDS.

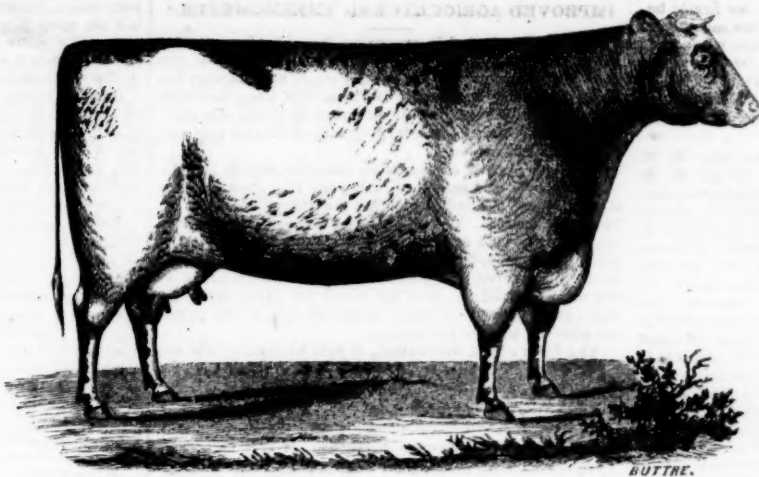
CULTURE OF WHEAT.

Messrs. Gaylord & Tucker—The practical farmer should watch the operations of nature; his business leads him constantly to observe her works; he sees her economise all her means, and they are used with a view to certain results. It is the business of the good husbandman to make himself acquainted as much as he can with the laws which govern matter, so as to be able to aid nature in her operations, and by working knowingly and with his eyes open, benefit himself and his fellow men. To obtain this end, it is necessary for the farmer to work with his head, as well as with his hands; to lay hold of all the light placed within his reach, to economise labor, and endeavor to obtain the most he can from his outlay of time and money. It is true all agricultural products are greatly depressed in the market at this time; that there is but little inducement held out for exertion; yet what exertions he makes should be properly directed, and one of the best means of obtaining this end, is for each to gather up all the facts he can, and disseminate them by means of agricultural papers—those eyes to farmers. I have taken an agricultural paper for many years; although there are many things published I consider of little use, yet upon the whole I consider a good paper as indispensable, and I am astonished that all intelligent farmers do not see it for their interest to take one or more.

From the above and other considerations, I feel it my duty to add, if I can, to the general stock. I will therefore give you some account of my practice and observations. In the first place, it would be proper to remark, that a large part of the land in this town, is a good wheat soil; many of our ridges (for the surface is undulating,) appear to be formed, as far as they have been penetrated, of alternate strata of different kinds of soil, which after exposure to the sun and air become very productive. There is every kind of soil, from light sandy to stiff clay loam, and all the different varieties between these extremes, are found frequently in one field. The larger proportion, however, inclines to a clay of different degrees of tenacity; some of the varieties of the latter are considered the strongest and most productive we have for wheat, producing the heaviest yields when properly managed; yet they are most liable to winter kill, and in consequence, to be injured by rust. To avoid these, I consider a body of vegetable matter, in the form of decaying sward or straw manure, which has undergone

but little fermentation, harrowed in with the seed, as indispensable on land which has been much worn. For wheat, I plow but twice, breaking up in June and July, as late as possible before haying, which commences commonly in the fore part of July, cross plowing the latter part of the month of August and the fore part of September. Sowing is commonly done between the 10th and 25th of September. If sown earlier, the Hessian fly and a weed called shepherd sprout, is apt to injure it, the latter by overrunning it the next spring, if it obtains a fall growth. If sown later, it does not get growth sufficient to stand the winter. 40 miles west of here, however, they prefer to sow in August. Land should lie, after plowing before sowing, from 10 to 20 days. There are reasons for this, which I have not space here to enumerate; suffice it to say experience has taught it. You will naturally ask, do you let weeds and grass grow up and flourish on your fallow? Certainly not. After breaking up, pass a roller lengthwise of the furrows, shutting all in, if properly plowed; a few days after, pass a heavy harrow the same way; when weeds and grass spring up, I have a large cultivator with wrought teeth, drawn by three horses, which is passed the same way the first time, once in a place; lapping one-half is sufficient; it stirs the ground, and it cuts up the weeds and grass better than the plow; the harrow would be of but little use; next time crossing, repeating this as often as necessary. I kill Canada thistles in this way; if attended to well, few will appear next year, sometimes not any. A cultivator, such as I use, will pass over from 5 to 8 acres in a day; it cannot be used to advantage after a shower, or when the surface is wet; for it will clog up, as we call it, although the land may be in a condition to plow. If, after plowing the last time, and before sowing, weeds and grass spring up which the harrow will not tear up and kill, the cultivator must be used on the furrow, before sowing, passing once in a place; the harrow will take all up after that.

I will now endeavor to give you an account of my method of preparing and applying straw manure. Wheat straw, stacked up carefully in the barn yard, affords a good shelter to stock in winter, and a large part of their living. I feed mine hay twice a day, but they do not need as much hay if they have good bright dry straw to go to. In this way, the straw is all worked down, and a heap of excellent manure is formed, with the droppings and urine, which is mostly collected here, particularly if the stack stands on a low part of the yard. This heap will but slightly ferment, if left untouched until wanted for use. A part of this is taken for spring crops, together with what collects in the remaining part of the yard, not occupied by straw, and the stable manure, and plowed in. After the ground is plowed for the last time, before sowing the wheat, a few loads of this manure, say from 5 to 8 per acre, are drawn and thrown in small heaps about the field on the furrow. When ready for sowing, these are spread evenly as possible, and the harrow passed over lengthwise of the furrows, to smooth down for sowing; the straw may look as if it would clog the harrow, but it will not if the wheat was threshed with a machine, and I never use any other. I have used it dry from the stack without any inconvenience to the harrow, (a large square one, with 36 teeth.) After sowing the wheat, it is harrowed in as usual. I have always put this manure on pieces most liable to be injured by freezing; it has always saved the wheat; in fact I have tried parts of fields where I had always lost my wheat before, with the most perfect success; the straw would be perfectly bright, and the grain plump. The surface water must be drawn off by draining, for if water stands on a piece of ground, nothing will save the wheat. This can be done with a plow on most of our fields; even on land which descends fast, frequent furrows are necessary to conduct off the water rapidly.



IMPROVED SHORT HORN COW "GAZELLE."—(Fig. 32.)

OWNED BY MAJ. J. B. DILL, AUBURN.

To "GAZELLE," was awarded the third premium for the best cow of any breed, at the Fair of the N. Y. S. Ag. Society, held at Albany, Sept. 1842. She was calved in 1838—sired by Charles, 1816—d. Crocus by Romulus, 2563—g. d. Prize by Marlboro, 1189—g. g. d. Tulip by Regent, 616—g. g. g. d. (see Herd Book)—g. g. g. g. d. Primrose by North Star, 459

I shall now enter on what I suppose is considered debatable ground. I consider rust, in most cases, the effect of winter injury and retarding the growth of wheat. As I have not space to give you all my experience and observations bearing on this point, I will merely state a few facts. The wheat plant is injured by freezing and thawing, and retarded in its growth; when it recovers from this, the season is advanced; if the land is strong, the plant starts with redoubled vigor; the fields look to the unaccustomed eye, rich and promising; in fact, the straw is generally larger and ranker than that of early grain, which comes forward gradually and ripens slowly—this comes on with rapidity, apparently endeavoring to overtake the early grain, and ripen at the same time; a warm growing rain falls, which serves to ripen the early plant, but increases the circulating fluids in the late plant to such an extent, that the sap vessels burst, and the sap flows out, forming a

black gummy substance on the outside, and the rents in the straw can be easily seen with the naked eye; depriving the grain of its nourishment, it shrinks, and should be cut as soon as possible.
GEO. L. BECKWITH.
West Henrietta, Mon. co. N. Y. Feb. 24, 1843.

COMMENTS ON JAN. No. OF THE CULTIVATOR.

HAVING finished my volunteer labors in commenting on your paper for the past year, and that too, not only without any censure from your numerous correspondents, but with some commendation from a portion of them, I am encouraged to pursue the same course for 1843; and here commence with your January number. But I must first renew the pledge given in the conclusion of my December comments, to be constantly looking out for symptoms of disapprobation,—a few of which would suffice to stop me, as nothing would mortify me much more than to be deemed either officious or obtrusive.

"The Farmer's and Gardener's Club," is an excellent scheme, well adapted to every town, village, and thickly populated neighborhood. For in such comparatively small and private associations, almost every member would be willing to take part in familiar discussions on agricultural and horticultural topics, each thereby contributing to elicit much useful information: whereas in large societies, very few of the members can ever be tempted to speak.

I have read your brief eulogium on Liebig, with great pleasure, for he justly deserves all you have said of him. He certainly stands at the head, and that too, longo intervallo, of all the chemists whose works have ever yet reached our country; although like all other illustrious men, he has excited the envy of his inferiors, which has produced several most pitiful attempts to injure his scientific fame.

The admirable character of Mr. Coke of Holkam, given by your correspondent Tweedside, furnishes an excellent model for imitation; not that any American farmer could ever expect to acquire such immense agricultural wealth; but thousands upon thousands of us might tread in the footsteps of so noble an example, and pursue similar means of increasing and improving his property.

In the very well written article headed "Choices of a business for life," there is the following almost incredible statement:—"Gen. Dearborn stated before the Massachusetts legislature, that he had ascertained by reference to the books of the Custom House, the Banks, the Probate office, and the oldest merchants of Boston, that 97 out of every 100 engaged in trade, and in buying and selling, failed, or died insolvent!" Would it not be of infinite service to our whole country, but especially to our agricultural brethren, if some credible person would make a similar calculation as to the doctors and lawyers in the United States; for it really seems to me as if fully three-fourths of all our youths were crowded by their thoughtless parents, into one or the other of these professions. How this monomania will end it is fearful to anticipate.

Under the head "Agriculture of Virginia," the account given of Mr. Weaver's farming, is, upon the whole, very commendable. But the writer mentions one practice of his, which is sanctioned neither by theory or experience. It is the cultivation of the same field "two successive years in wheat." I have known several persons to try it, and I once did it myself; but in every instance, the second crop was vastly inferior to the first.

The account given by Mr. C. N. Bement, of Hussey's & Baldwin's Corn and Cob Crushers, is such as ought to induce every one who feeds corn to stock, to buy and use one; since there can be no longer, even a shadow of doubt, as to the great economy of the practice. Yet, strange to say, there is probably not one farmer in a thousand, even among those who are thoroughly convinced of their great utility, who has ever bought either of them

Our extreme tardiness to adopt even what we firmly believe will materially benefit us, is among the most unaccountable things in our nature; and the man who could cure us of it, would be one of the greatest benefactors to our whole class, that ever lived. The advancement of our husbandry, in all its branches, depends as much upon the removal of this obstacle, as it does upon any other thing whatever.

I agree entirely with your correspondent, Mr. M. T. Gehee, in his doubts as to the possibility of Dr. N. B. Cloud's new system of planting and cultivating cotton, accomplishing all that he seems confidently to expect from it. I am perfectly willing to believe that it may be much better than the old, and that he actually gathered from a single acre, treated in his mode, the quantity which he says he did; for that he states as a matter of fact, and we are bound to confide in his veracity. But when he expresses the belief that by his method, he can make from 3,000 to 5,000 weight on the same identical land which would yield only from 300 to 500 weight, if cultivated according to the present most approved mode, I feel myself at liberty to call such belief a most extravagant and incredible notion—to say the least of it. True it is, that the same land, after being highly manured, will often produce ten times as much as it did in an utterly impoverished state. But that a mere difference in the modes of culture, could possibly produce so great a difference in the product of two pieces of land, exactly alike in every respect, is something which must actually be seen to be believed. We may search the whole annals of agriculture, without finding a single well authenticated fact to warrant any such expectation. Still I will not positively affirm that such a thing is quite impossible, for I believe nothing to be so, but for a man to bite his own nose off. But Dr. N. B. Cloud, must first make, by his new mode, from 3,000 to 5,000 lbs. of cotton, ascertained by actually weighing the whole quantity, upon land of which the same quantity, cultivated according to the common most approved method, yielded only from 300 to 500 lbs., also ascertained by actually weighing the whole produce. Let him do this, and I will be as ready as any one to pronounce him a benefactor to every cotton grower in the United States; for he would well deserve the title.

I am very sorry that your correspondent Mr. W. H. Sotham, has misunderstood the very brief remarks which I ventured to make on one of his former communications. I certainly did not mean to "censure" the opinions which he there advanced; for they were given on a subject of which I knew little or nothing—that is, the various breeds of imported cattle. The few observations which I took the liberty to offer, related solely to the manner in which Mr. Sotham expressed his opinion. If that was all right, then was I all wrong; and I am very willing now, to cry "péccavi" for it.

Mr. G. B. S. is certainly right as to the identity of the wild and tame turkey; and that they will breed together, is a fact perfectly well known throughout the country where the wild turkey is common. To cross them, improves both the size and the hardihood of the domestic turkey.

COMMENTATOR.

Feb. 17, 1843.

BLACK SEA WHEAT, &c.

MESSRS. EDITORS.—For three or more seasons, this variety of wheat has been cultivated in this vicinity, and with universal success. I have seen the grain selected from the most rank and lodged portions of the field, threshed separate, and the yield was about one bushel to the shock; in fact, it has invariably given a good return, from 20 to 40 bushels to the acre. The grain is not as light colored as other varieties, but the berry is always plump; the quality of flour is more harsh, and not as white. The great encouragement to grow this kind of grain with us, is that it never failed of yielding a good return, and in most cases a large crop, not subject to the rust, as other varieties have been here.

FREAKS OF NATURE.—I learned from Erastus Culver, of Wells, that a neighbor of his, Mr. Halsey Goodrich, had two heifers that brought each other to milk at one year old; one of them was milked three consecutive years before she had any offspring. Also, Mr. Joseph Button, now a resident of Chautauque co. N. Y., had a calf stray from his yard at about two weeks old, which accompanied another heifer calf between four and five months old, and by the constant sucking of the younger calf, brought the elder to milk within the space of six weeks.

SIGNS OF THE SEASONS.—On Friday night, 23d of December, we had a slight shock of an earthquake. It happened about midnight; was felt in different parts of this county, from six to ten miles from Lake Champlain. Whether the shock was visible in other parts of the state, I have not learned. It appeared like the rumbling of heavy thunder, which lasted no more than two or three seconds. In conversing with several who heard it, it was more sensibly felt where the dwellings were founded on the rock, by a sudden jar, as if a cannon had been exploded near by.

GRASSHOPPERS were very plenty here in the month of January, after the snow left. They were seen in some parts by hundreds. One man near me, kept several under a tumbler without food two weeks, which fasting did not affect their sprightliness.

S. W. JEWETT.

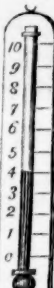
Weybridge, Vt., Feb. 17, 1843.

IMPROVED AGRICULTURAL THERMOMETER.*

HAVING succeeded in procuring the aid of my indispensable friends, Monsieur, the French chemist, and the sage Wampoom, the Indian doctor, I was highly delighted in being enabled to perform the long intended excursion in pursuit of the precious critique, the truly aqua mirabilissima, for enlarging and otherwise improving the thermometer.

July was chosen as the most suitable month for the excursion; at this season of the year the glowing verdant heat had excited into action the utmost strength of blooming nature. The undertaking is crowned with brilliant success—the much sought for plants have been discovered—the pure nectar has been distilled from the recently discovered rare plants, 4 drops of which added to the original critique, give the world the great desideratum—the agricultural thermometer brought to its greatest possible state of perfection.

The form of the instrument, it will be seen by the annexed figure, is but a little varied from the one given in the last vol. of the Cultivator.

- 
- 10: Posthumous fame.
 - 9: Genius and science made practical.
 - 8: Genius and science combined.
 - 7: Scientific agriculture with horticulture.
 - 6: Emulation awakened.
 - 5: Profitable experiment.
 - 4: Book farming commenced.
 - 3: Industry with a desire to improve.
 - 2: Unprofitable industry.
 - 1: Industry with conceited ignorance.
 - 0: Ignorance with sloth.

The wonderful liquid which the thermometer contains, appears almost to say, "I am the spirit that dwells in the flowers." It possesses such extreme sensibility, that, when strongly excited by recitals of well authenticated acts of good husbandry, it becomes slightly luminous, and in some extraordinary cases, emits brilliant sparks. And when recitals of the antiquated practices of the ignorant and slothful are brought to the test, the critique, or liquid, contracts to about one-half its usual size, accompanied by a disagreeable tremulous sensation and faint hissing.

The experiments now presented are few, as we are very much occupied in perfecting a literary, and also a Political Thermometer, which I introduced to the American public, in rather an unfinished state, some twenty years ago. With the aid of my scientific friends, I have great hopes of completing and making them valuable.

The great importance of Thermometers in all the higher branches of science and the arts, is just beginning to be known and fully appreciated. An article was noted in the N. Y. Tribune, of 22d December, 1842, taken from the London News, containing notices of the "Marine" and "Steam" Thermometers, recently invented in England.

Whatever practical benefit England, and other countries, may derive from these new applications of the thermometrical principle, it can hardly be expected that the "marine" and "steam" will ever successfully compete with the "agricultural" thermometer, either in regard to celebrity, or to real, practical utility. Therefore, in respect to the novel applications of the great principle of expansion of liquids by heat, our own nation must still maintain a decided ascendancy. To our own country and times, has been reserved the distinguished honor of making and applying the important discovery, that at least one liquid—the *florum nectar americanum*—is subjected to expansion by intellectual heat, and that by tried rules and degrees of measurement, it as clearly indicates the degree of such heat, as the mercury expanded by atmospheric heat, shows its degree and intensity in the centigrade, Fahrenheit's, or any other thermometer. The analysis of rare plants that led to the improvements, strikingly elucidates the workings of nature, and points to "an inexhaustible field of new combinations and most valuable results." Your readers will find in the particulars of the experiments now to be detailed, new illustrations of the great discovery that the "nectareus" fluid is expanded by intellectual heat, and may safely be trusted as a proper measure of the "fire of genius."

Having completed my improved thermometer, and wishing to prove its correctness by the severest test, I had two motives for giving its first experiment to the writings of

COMMENTATOR: first, because he had suggested the improvement of making it detect errors, and second, because if it could detect a fault in him, it would be the greatest possible evidence of its infallibility.

On applying it to his article, on page 52, vol. IX, of the Cultivator, the critique rose at once to the tenth degree, and stopped perfectly still, as if conscious of being at home; which confirmed what I had suspected, that that degree indicated the highest merit of a living writer. But gentle reader, you can form no conception of my astonishment, when it began to move irregularly at short distances up and down, like a hound at fault, accompanied with a tremulous thrilling motion, and even a slight hissing sound, the critique beginning at the same time to settle very slowly and with seeming reluctance.

I was upon the point of dashing the instrument to atoms, when my friend the doctor, and wonderful chemist, seizing my arm with all his might, exclaimed—"Begar sair, you must not braky de instrument, ven I have had de grand labor to maky de composition; de

instrument cannot lie sair, de composition will always tell de true; Monsieur Commentatair be von man; he may maky some leetle mistake. Suppose you read de article, den you see." I then read the article till I came to the white daisy, when the doctor again exclaimed—"Dere now sair, I will tell you de mistake. Dere be two sort de vite daisy; von sort be very good for cattle, de oder da will not eat. Monsieur Commentatair aver see only de villain sort—de good, he hav not see." While this explanation was going on, the critique resumed its station at the tenth degree; this satisfied me of the perfect correctness of my thermometer.

Before completing the improved agricultural thermometer, I felt some little misgivings, lest, by increasing its length, it might excite some slight jealousies among the different contributors to the subject; but upon due reflection, I cannot believe that any of those gentlemen, actuated as they must have been, by the deepest and purest feelings of philanthropy, can be affected by any selfish views, and I have the further satisfaction to find that the instrument will not indicate any living merit above the 10th degree. That being the climax, those who reach it can have no fear of being outdone. With these views of the subject, I ventured to apply the instrument to a copy of the address, before the Agricultural and Horticultural societies of New Haven co., Sept. 30, 1840, by

HENRY COLMAN. The various phenomena exhibited, were, as I had anticipated, truly singular. The critique rose suddenly from the bottom of the instrument to the 7th degree, where it made a stop, and becoming slightly luminous, at the same instant threw out some bright scintillations. It then became seemingly quiescent for a moment, and gradually settling down to 6, as if to take a new and fair start, rose with a quick motion, two degrees, to 8, where it stopped as before, going through the same operations, with a little increased brilliancy; it continued this course, alternately settling one and rising two degrees with increased splendor, until it reached the 10th degree.

When the Agricultural Survey of Massachusetts was tested, the critique resumed its former station at 10, attended with glowing heat, and at the same time sending up brilliant light, and many sparks. Mr. Colman makes "the fields his study, and nature his book."

The motion of the railroad cars, when under way, has a tendency to make me drowsy. The other day, while enjoying a pleasant fit of drowsiness in a train of cars, running from this place eastward, I was awoke by a disagreeable hissing and a tremulous sensation of the thermometer, which was snugly stowed away in an inside pocket of my jacket, where it is sure of being found in all my excursions from home. The cause of the hissing, was a dialogue in progress between Mr. William and Mr. Thomas, two of our passengers.

William.—You call me a farmer of the antiquated practice: I know not what you mean sir, by this lingo. I have been a farmer these forty years, and learned the practice from my father, and think I have a good right to know something about farming; yet I do not pretend to know more than my father, for why should we "undertake to be wiser than our parents." I am satisfied with 30 bushels of Indian corn to the acre, and think it barely possible to produce more from the best land. And with regard to all your humbuggery of book farming about root crops, draining, &c. &c., it is of a piece with your 100 bushels of corn to the acre.

Thomas.—Why should you be satisfied with 30 bushels of corn to the acre, when the highest authenticated facts will go to prove beyond all cavil, that in many instances, and in various parts of the country, 80, 90, and 100 bushels have been produced on one acre, and in some instances, 130; and Earl Stimson of Saratoga, has raised his 150 bushels from one acre. What you sneeringly term book farming, I must remark, that a little attention to that subject would be of great value to you, not only by enabling you to double your crops, but to learn the vast importance of roots, draining, &c.

Roots.—Turnep Townsend, as Lord Townsend, the introducer of the turnep culture into England, was sneeringly called, by the fools that vegetated in the precincts of the court, has added by that root alone, it is estimated, not less than 60 millions annually to the value of English agriculture. The introduction of the potatoe into general use as an article of food, has only equaled the benefit conferred, by the establishment of the field culture of the turnep; and in regard to

Draining Land. Thirty years since, occasional attempts were made to open drains, but they were without system or skill; were principally confined to the worst swamps, and frequently failed to produce the desired effect. The light which geology has thrown on the nature of springs, and the effect which chemistry applied to agriculture, has shown must be the result of stagnant water or wet soils on the cultivated plants, has demonstrated the best method of draining, and its necessity, and rendered fertile millions of acres that were wholly worthless before. Draining, is one of the most valuable of modern agricultural improvements.

While William was exhibiting his intimate acquaintance with antiquated farming, the instrument was noted in the greatest possible confusion, the critique much contracted in size, exhibiting a disagreeable tremulous sensation, with faint hissing, casting a dark shadow on the entire instrument, with the exception of deg. 0, 1, and 2.

When Thomas commenced spreading out his well authenticated facts, the shadow was changed into prismatic colors, which settled over 9, accompanied with some heat.

It is gratifying to learn that those practicing on the antiquated modes, have been much reduced in numbers

* See vol. IX, pages 20 and 114.

MESSRS. EDITORS.—Your correspondent "Comments" terms me a "drawcansir," in my attack against Liebig's theory of plaster being decomposed by ammonia at atmospheric temperatures. I was aware, when I wrote the article, that such discussion was better calculated for a scientific journal than for an agricultural paper; at least at the present day. Yet I expect the time will soon arrive when agricultural pages will be the proper medium through which to contest scientific errors in

the abstract. Commentator must be aware that I merely defended myself against an attack that had repeatedly been made on me. If the butter in *re*, were spread on with too rough a hand, I can only promise my old friend, that in future contests, I will treat with all the *suaviter in modo* the support of truth will permit.

New-York, March 7, 1842. WM. PARTRIDGE.

TOWNLEY'S OBSERVATORY HIVE.

MESSRS. GAYLORD & TUCKER—I send you a description of my Observatory Hive, which possesses, in my estimation, more valuable properties, taken as a whole, than any other that I am acquainted with. It has all the advantages of a common hive, as to capacity, cleanliness, and security against vermin, while at the same time it enables the apirarian to ascertain at all times the state of his colony, and of every individual cell, the progress of the brood, the quantity of provision, the existence and number of royal cells, and the probable period of swarming. It affords every facility for making artificial swarms; the queen may be followed in all her movements, and even in her laying. It is easy to open the hive and lay hold of her at any time. The whole of this observatory hive, is made to turn round on the shoulder of an upright shaft, through which shaft the passage for the bees must of necessity be made, and which does not admit of a bore of above an inch in diameter. As however this narrow perpendicular passage is of no great length, it need not be more than three inches; many thousands of bees will in the course of a few minutes, if necessary, make their egress and ingress through it without incommoding one another. This observatory hive consists of four frames; each frame contains two lights of glass, one on each side, to open at pleasure; each frame is 12 inches in height, and 10 in width, and I can open any particular leaf without interfering with the rest. It is also well adapted for artificial swarming. I have raised twelve queens in this hive at once, and took them out and made artificial swarms from them. The bee master has the whole interior completely under his eye, and at his disposal, and it presents great facilities for making experiments, and for observing the proceedings of the bees, which being prevented from constructing more than one comb, cannot conceal any part of their operations, as in other hives. The whole turns on an upright shaft, and when the observer is satisfied with inspecting one side of the comb, he may wheel the hive round and examine the other, without changing his station. By this mode of proceeding, he may contemplate his favorites at his leisure, without disturbing them, and without the slightest danger of being annoyed by them; for it is true that they become so much accustomed to the opening of the shutters, that the admission of light ceases to disturb them. In short, all the experiments that have ever been made, may be verified by means of this hive, the result found, and new experiments tried.

EDWARD TOWNLEY.
New-York, March 4, 1843. 75 Thompson st.

GEOLOGICAL SURVEY—ANALYSIS OF SOILS.

EDITORS OF THE CULTIVATOR—At the conclusion of a notice of Mr. Vanuxem's Geological Report, in the March number of your valuable periodical, after speaking favorably of the manner in which that gentleman and myself have performed our duties, you remark that some matters of great practical importance have been overlooked by us. Allusion is then particularly made to the analysis of the various soils of the State, the want of which you seem to think will cause much disappointment to the agriculturists, who have been among the most efficient friends of the survey.

The following statement, which you are at liberty to publish, will, it is believed, at least so far as I am concerned, account for the omission to which you refer.

In the arrangement of the different departments of the survey, it was made my duty to examine the mineralogy of the State, and to execute the analyses of its ores, mineral waters, soils, and other useful products. It was soon found, however, that the territory which New-York embraces was too extensive for the completion of this plan in all its parts during the four or five years allowed for the work. My time was fully occupied in visiting the more important mineral localities, in selecting illustrative specimens, and in the various analyses of ores, mineral waters, limestones, &c. &c. The extent to which these personal examinations were carried in various parts of the State, may perhaps be judged of by the fact, that the total of the journeys made for the purpose is not less than 15,000 miles. To this may be added the preparation of five annual reports of the progress of the work, each of which occupied from two to three months, and of the final report, which, after most of the materials were collected, kept me busily engaged for nearly a whole year.

But as all this may not yet account for the fact that the analysis of our soils was neglected rather than other parts of the work, I may observe that, so early as 1838, my attention was directed to the subject, and I was about making arrangements for an extensive series of experiments. Several difficulties, however, soon presented themselves: one of these related to the proper arrangement and classification of the soils. I examined works on agriculture, and found great discrepancies in regard to these; and it seemed to me that, without some system, I might indeed execute analyses and perform experiments, but they would lack the very thing which was required to make them useful. A few specimens were wanted from different parts of the State, selected

with reference to some arrangement by a person practically acquainted with the soils, and who yet had science enough to comprehend fully the objects to be attained by such investigations. These views led to a proposition, made, I think, to the State Agricultural Society, that they would take upon themselves the direction of this part of the survey; but I am not aware that any steps were taken on this subject, which is a matter of regret, as they might have given a proper direction to the observations of the geologists, and the analyses of the chemist.

Another difficulty which presented itself, was in regard to the processes to be adopted in the analysis of soils. Organic chemistry was at the time in a chaotic state. The formula of Davy was confessedly defective, while the new ones proposed in this country appeared to me to be still more objectionable. The discussions which followed among our own chemists, and the able researches of Liebig, Johnson and others, abroad, have thrown some light upon the true modes and objects of such investigations; and yet I am satisfied the part of the survey, the omission of which you so much regret, would, if now undertaken, lead to more useful results than could have been expected at any former period.

It was my original design to divide the report from my department into three parts. First, economical mineralogy; second, descriptive mineralogy; third, geographical mineralogy. The two first of these, already published, grew to the dimensions of an ordinary volume, and I therefore gave up, at least for the present, the publication of the remaining part. It was my intention in this to have given a condensed view of the mineralogy of each county, under an alphabetical arrangement, and to have noticed such facts as might be thought useful to the artist or agriculturist. Should its publication ever be called for by the interest felt in the subject, the detailed examination of soils may then be advantageously introduced. Could not some of our practical agriculturists be induced to co-operate in a work of this kind? Yours, respectfully,

LEWIS C. BECK.

New-Brunswick, N. J., March 10, 1843.

CULTURE OF SILK.

Circular to Silk Growers, and to encourage the Culture of Silk.

THE subscribers having established themselves as silk commission merchants, with prospects of usefulness and success, will continue to attend particularly to the sale of American raw silk.

From long experience in the silk business, it is expected they may be of service in finding a ready market for American raw silk, and facilitate its production, by giving information of the management and care necessary to insure success.

1. To raise silk of the best quality, it is of the most importance to obtain a good description of silk worm eggs, and not mixed or crossed of different kinds. The Mira-Belle or Italian Yellow Peanut cocoon, and the Large China, White and Yellow, are good, and are being successfully raised in many parts of the States.

2. The eggs should not be permitted to hatch too early, or before the mulberry leaf will be in sufficient supply. June to July has been usually found the right season, and safest to raise the worms healthy.

3. Only feed with fresh, sound, and dry leaves. Cleanliness also is very necessary, and a moderate use of lime has been found of advantage.

4. The cocoonery should be arranged to be easily ventilated and protected from exposure or damage by storms or sudden changes of temperature, and from attacks of vermin.

5. The earlier the cocoons are reeled off, the better will be the silk, and easier to reel. If not reeled immediately, it is necessary to kill the crysalis, and in doing so, the cocoons are liable to be injured by too much drying. It is sufficient and safe to dry them two or three days in the sun, or put in the oven for two or three hours after baking bread.

5. The value of raw silk depends materially upon good, even and round reeling; a great deal of silk is entirely lost by want of practice in doing this properly, or being made of inferior quality. It is best to reel two threads of silk at once, of ten or twelve strands each, and which can be made round by crossing, and particularly not to be flattened or matted together. Use a two yard frame, and put up in 2 oz. hanks.

The worms from 5,000 eggs may be expected to require from 100 to 150 lbs. of leaves before raising. The produce varies very much according to success and description, and each one's experience will alone give further data.

Samples of silk, if sent early, as soon as reeled and ready for market, will have immediate attention, and sales will be made to the greatest advantage. Liberal advances will be made, when required, on consignments of raw silk and cocoons, on receipt and inspection of the quality.

G. M. HAYWOOD & Co., 128 Pearl-street.

P. S. We have made arrangements to offer for sale, on early application, a good description of silk worm eggs, warranted, at 50 cents per 5,000; also, a proper and simple reel, at the cost of 1 lb of silk, by which a person can reel from 1 to 2 lbs. of good silk per day, and in the best way. All persons that raise cocoons are recommended to reel them also, and obtain the largest gain.

New-York, March 15, 1843.

CULTURE OF SILK.

ON this subject, we have been favored with the following extract of a letter from GEO. ALLEN, Esq. of Brockport, a gentleman who has had much experience in the business, to a member of our legislature:

"I consider that there is now but one obstacle to prevent the culture of silk from becoming a regular and certain business—one from which results may be calculated with as much accuracy and confidence as any other branch of agriculture. This formidable obstacle is the liability of the worm to be affected with diseases of a fatal character.

"My experience and observation in the business, have led me to the following conclusions, as a basis for future operations:

"1. That the diseases of the silk worm, above alluded to, are predatory, but not necessarily fatal to the first hatchings in a season, if duly attended to.

"2. That it is contagious, and when introduced among a family of worms in their advanced stage of existence, incurable.

"3. That it is therefore unsafe to feed more than one crop in any apartment during one season.

"4. That the worms designed for supplying eggs or seed should be fed and kept in a building entirely separate from those used for producing cocoons.

"5. That the eggs should be kept in a temperature so low as to prevent them hatching until they are brought out and exposed to a suitable temperature.

"I think I may safely say that my losses, occasioned by diseases of the worms, the two first seasons, exceed one thousand dollars. A part of this loss may indeed be attributed to injudicious and inefficient management on the part of those to whom the business was entrusted; but notwithstanding this, there would have been a fair profit derived from the business, if the rooms had been free from disease.

"The bounty offered by the State affords encouragement to those who are prepared to avail themselves of it, to persevere in the business. I cannot suppose the law will be repealed; certainly I think it should not be, as I view it, in the present depression of other agricultural products, as of great importance to that department of industry; and I think those who encounter all the casualties attending its introduction, should be encouraged by the legislature both of the State and nation."

RECLAIMING SWAMPS.

MESSRS. EDITORS OF THE CULTIVATOR—I have been waiting some time to see the result of an experiment that I tried in reclaiming swamp lands. I will now tell you the manner in which it was done, and you are at liberty to use it as you please. The swamp was low and flat, difficult to be drained, covered with bogs, brush, &c., and as is usual on such lands, muck not deep. After draining sufficiently, grubbing out the brush, cutting the bogs, clearing it off, &c., I commenced dragging it about the last of June, 1840, with what I call a coulter-tooth drag, the teeth being flat and sharp, to cut instead of tear, like the common drag-tooth. As the drag passed over and tore up sticks and other rubbish, I had it raked up and carted off, to give the drag a fair chance to cut up and mellow the surface. That being thoroughly accomplished, I sowed it with buckwheat and seeded with herdsgrass, very thick. I harvested a large crop of buckwheat straw, tolerably filled; the herds grass came up, but remained small until the next spring, when it began to grow, and made a large crop. I mowed it in August, when quite ripe, leaving considerable seed on the ground. Last summer, 1842, it was much thicker on the ground, the quantity somewhat increased, and no appearance of wild grass. I have now no doubt of its remaining the best of meadow. I also commenced washing sand on to adjoining lands, some that was filled with bullrushes, and some that was a hard, retentive clay, which had refused to yield any thing but a very light crop, even when manured. I prepared my furrows and ditches in the fall of the year, to carry the water where I desired. I carried the stream, before it arrived at the meadow, (having considerable fall) through a sand bank, so that with the force of the water and a trifle of labor, I could send any quantity of sand where I desired it. The result is what I anticipated, the destruction of the bullrushes, and in their place an increased quantity of good grass; and on the clay soil, where it was scarcely worth mowing before the sand was washed on, I mowed the past season, as far as the sand had been spread, or even the rily water extended, a fine crop of the best kind of hay. I have tried carting on the sand, which has some beneficial effect, but I think not near equal to what it is when washed on—the water seeming to assist the sand in penetrating the clay. I remain truly your old friend,

FROCK & TROWERS.

Claverack, March 20, 1843.

GRAFTING.—Melt a little beeswax and tallow together, and if it is at hand, stir in a little powdered chalk, and while hot dip in some strips of old calico or cotton cloth. Tear them into strips of such width as may be most convenient to wrap around the stock and scion. Let the stock and scion be covered, so as to prevent the escape of the sap or the introduction of water, and the work is done. This will, I think, be as good as the surgeon's adhesive plaster, or any more complicated or expensive grafting wax.

B. B.

MESSRS. EDITORS.—Having been much interested in the plans of farm houses and cottages, from time to time given in the *Cultivator*, I have been induced to send you the accompanying plan of a farm cottage, which I projected some three or four years since. It may be thought by some, that a female is stepping out of her department, when she attempts planning houses. I do not think so, inasmuch as females are the parties most concerned in these arrangements.

This plan was predicated on a six year's residence in a farm house, which, perhaps, was as convenient as most houses of that class, but when the "labor saving" principle was applied, it was found very defective. I have observed that in all the plans submitted for your paper, there has been no provision for dairying; without this, I consider a farm house incomplete. From the experience I have had in this matter, I am induced to shrink from the very thought of going out in the hot sun three or four rods from the house, as many times in the day as it is necessary to go to the dairy. If men would oftener consult their wives in these matters, I presume they would in many cases, reap their reward for any fancied compromise of dignity, in additional peace and quiet.

In this plan, (figs. 34 and 35,) I have endeavored to combine utility and beauty. In my estimation there can be no surer indication of happy independence, than a neat, tasteful cottage, on a well managed farm, and where these are seen, I always presuppose its possessor realizing all that Thomson has so beautifully attached to a philosophical country life:

"Of men
The happiest he, who far from public rage,
Deep in the vale, with a choice few retired,
Drinks the pure pleasures of the rural life."

"Here too, dwells simple truth, plain innocence;
Sound, unbroken youth,
Health ever blooming, unambitious toil,
Calm contemplation, and poetic ease."

This is the life
Led by primeval ages, uncorrupt,
When angels dwelt, and God himself, with man."

By a little attention, you will perceive this plan admits of many modifications to suit the circumstances of the builder, without any sacrifice of the main conveniences. It is estimated that a frame house of this description, would cost in this vicinity, about \$2,500, probably much less with you.

In the first place, the ground should be selected so as to have drains laid under the surface, from the sinks, dairy, &c. to the piggery or barn yard. My husband suggests that to complete the arrangement of the farm buildings, the barn, carriage house, granary, piggery, &c. should be erected in the rear, so as to form a hollow square, sheltered from the cold winds, and open to the sun.

I will now attempt an explanation of that part of the plan which does not explain itself. It was not thought necessary to give a plan of the upper part, as that can be arranged at pleasure. Suffice it to say, it is designed to have twelve feet posts, which will afford room, with such an elevation and width, for good chambers, well lighted.

Explanation of ground plan, fig. 35:

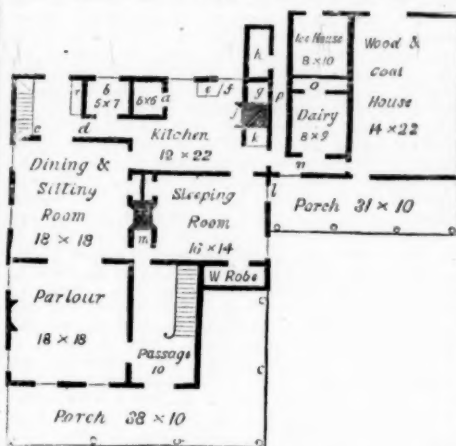
- a.—Dark room for dairy utensils, &c.
- b.—Store room and pantry.
- c. d.—Cellar door, and passage from kitchen.
- e. f. g.—Sink, pump, and boiler, with faucet in bathing house for warm water.
- h.—Bathing house, with conductor from pump.
- i. k.—Fire place and oven.
- l.—Window from sleeping room, finished at bottom, for door in warm weather.
- m.—Closet for books and papers.
- n.—Passage to the out buildings, without going from under cover.
- o.—Closet between ice house and dairy, for butter, cream, fresh meat, &c.
- p.—Passage for circulation of air, &c.
- r.—Portable or stationary sink, to prevent the necessity of farm hands, and others, going to the kitchen to wash.

The dairy should be dug down three or four feet, built up on the sides, and paved with stones, plastered overhead, and the walls whitewashed. This part of the building is supposed to have a shed roof, and may be sufficiently elevated to admit of a room immediately over the dairy and ice house, for curing cheese. If a spring of water could be commanded, in such a situation that it could be carried through the buildings by means of pipes, it would be a great advantage.

This plan is supposed to front the east, access being had to the rear by the south end. It is perhaps unnecessary to say any thing about ornamenting the grounds in front, as that is considered a matter of course.



A FARM HOUSE.—(Fig. 34.)



Ground Plan.—(Fig. 35.)

One man to whom this plan was shown, remarked that "such a house might make the women lazy." If any of your numerous readers of the masculine gender, possess any such fears, if they have not already obtained that blessing, (a wife,) may they go to the "far west," where girls were never made indolent by convenient houses, but let them by no means go to New England.

Yours respectfully,

MATILDA W. HOWARD.

Zanesville, O., Feb. 14, 1843.

ROTATION OF CROPS

MESSRS. EDITORS.—From the account of the proceedings of the N. Y. S. Ag. Society, given in the *Cultivator* for this month, it appears there was no competition for the premiums offered by the Society for the Essay on Rotation of Crops, and introduction of new agricultural products. This is to be regretted. A judicious rotation or succession of crops on the farm, being considered, ever since the introduction of fallow crops and sown grass into field culture, as one of the most important points of husbandry.

When the immense improvement is taken into view, which the alternate system, as it is called, has brought about in those districts of country in Europe, where it has been established, it cannot fail to be interesting to the American farmer. In these districts, the value of the land has been more than doubled, the farming capital increased in a much higher proportion, and the appearance of the country immensely improved, compared with what it previously was.

It is gratifying to observe that the sowing of grass seeds on farms, has of late become much more general. Intelligent farmers now adopt regular rotations; but the practice is as yet far from general. Many farmers, although they now sow grass seeds, continue the old practice of taking successive crops of grain until their lands become so wasted as to be of little value, and difficult to recover to a profitable state; a course injurious to the public as well as themselves.

Regarding rotations, a view of European practice might afford some instruction and amusement; but the purpose of this communication is to notice some of the opinions and practice of American farmers on this subject, in so far as the subscriber's information extends. The subject is by no means new in America; societies and individuals have been duly sensible of its importance,

and earnestly recommended it to attention. In 1819 or 1820, your worthy and much respected predecessor, Jesse Buel, Esq. published a *Treatise on Agriculture*, which he offered to the Board of Agriculture of this state, with a proposal to print and circulate it, which, tho' approved of by a committee of their number, the board was unable to accede to for want of funds. I supposed Mr. Buel was the author of it, but he told me he was not, and I cannot now recollect the authors name. * This treatise, though it contains one or two erroneous statements, is a work of merit, comprising much interesting information in a small compass. The author's opinion of the alternate system, is in accordance with that of all who have written on the subject within the last fifty or sixty years. It is expressed in the following emphatic terms: "It forms the basis of all successful agriculture. Whatever pains we take, whatever expenses

we incur, in collecting instruments of husbandry, in accumulating and applying manures, and tilling the earth, all is to little purpose, unless we superadd a succession of crops adapted to the nature of the soil, to the laws of the climate, and to the physical character and commercial value of the articles raised." The above contains a just view, concisely expressed, of the PRINCIPLES on which all rotations ought to be founded. These principles are general, and applicable to every country, and to all soils and climates.

Regarding the plants of which rotations are composed, he adds: "Never to select for a crop, plants not adapted to the soil, and never in any case to permit two crops of the same species or kind, to follow each other." This last, constitutes what is commonly called the alternate system, or sometimes the convertible husbandry, which is now extended over the greater part of Britain, and has long been so in Holland and Belgium, where it had its origin, and was first adopted and established.

About the same time that Mr. Buel's work was published, the Ag. Society of Albany county, offered a premium of forty dollars, for the best essay on rotation of crops, and on manures, and their most profitable application. This premium was awarded to John Nicholson, Esq. of Herkimer co. in this state, author of a very useful compilation entitled "The Farmer's Assistant." This essay contains useful observations, and recommends the alternate system.

The following are specimens of rotations from these two authorities. The author of Mr. Buel's treatise proposes the following for sandy soils:—1st, potatoes—2d, rye, followed by turneps—3d, oats or barley—4th, clover—5th, wheat and turneps—6th, peas, or lupines, or lentils. In the above, there appears nothing exceptional in principle, except the order, which ought to be, 1st, potatoes—2d, barley—3d, clover—4th, wheat—5th, peas—6th, rye—which is a pretty severe rotation for sandy land. The sowing of turneps on the stubble of the rye and wheat crop, after harvest, without manure, which the author says he has done with success, with one plowing, and sometimes without any plowing, but only harrowing in the seed, to be eaten off by sheep, does not appear to have been followed in practice here, nor are lupines or lentils known here as crops.

For loam, he proposes, 1st, potatoes—2d, wheat—3d, corn—4th, barley—5th, clover—6th, wheat. This I should call a rather too severe rotation, requiring a very rich soil, and more than the ordinary manure of the farm to support it properly.

Mr. Nicholson proposes for all soils free enough for corn—1st, corn, with potatoes, pumpkins and turneps, in alternate drills—2d, spring grain and ruta baga—3d, barley—4th, clover, cut once—5th, clover, cut twice—6th, wheat. He says the practice of planting corn, potatoes and pumpkins, in alternate drills, is common in Pennsylvania, and doubts whether the spring grain could be got off soon enough for putting in ruta baga. It would therefore be preferable to keep out No. 2, and make the rotation a five shift in place of a six; as 1st, corn—2d, barley—3d, clover—4th, pasture—5th, wheat, which is a very good course. For a gravel or sandy soil, he proposes 1st, corn, potatoes, &c.—2d, spring grain, followed by buckwheat, plowed in—3d, wheat, rye or barley—4th, grass—5th, grass. I suspect the spring grain could seldom be harvested in time to sow buckwheat, and get it plowed in, in time to sow wheat.

In Oct. 1823, Mr. Earl Stimson of Galway, delivered an Address before the Ag. Society of Saratoga county, of which he was then the President, in which his system

* The Treatise here referred to, was written by Gen. Armstrong, Secretary of War under Mr. Madison, and now residing in Dutchess county. It was originally published in numbers in the Albany Argus, while Judge Buel was editor, and afterwards in a volume, and also we believe in the *Memoirs of the Board of Agriculture*. It was re-published, with an introduction by Judge Buel, in the first series of Harper's School Dist. Library.—Ed.

of cropping and management is detailed. This address was afterwards printed by the society. Mr. Stimson's farm and management will bear favorable comparison with those of the best agriculturists in any part of the world; his crops are far, very far above the average of any country. The soil of Mr. Stimson's farm is of a light quality, and by many would be accounted poor. His rotation is as follows:—1st, corn—2d, barley—3d, hay—4th, hay or pasture—5th, wheat; or sometimes, 1st, corn—2d, barley—3d, hay—4th, hay or pasture—5th, peas—6th, wheat. About 12 loads per acre of manure, with a small quantity of plaster, was found sufficient to support this course; although sometimes, as I understood, he extended the pasture in some of his fields, to two or three years. The peculiar and distinguishing feature of Mr. Stimson's management is shallow plowing, by which the manure is constantly retained near the surface of the soil, and thereby always within reach of the crop. This, with his extraordinary correct tillage, is the great secret of his uncommon success. Another peculiarity of Mr. Stimson's management, is in having a very large garden, an acre or two, if I recollect right, cultivated chiefly by the plow, which is never allowed to go deeper in the soil than three inches. On stating my doubt as to the sufficiency of this depth for carrots and other tap rooted plants, he said it was no way detrimental, but the contrary. It is as much as fifteen or sixteen years since I had the pleasure of paying a visit to Mr. Stimson, and I can never forget his kindness and attention in showing me his improvements, and most readily affording me every information regarding his management. A like acknowledgment is due to him by many others as well as myself.

The next rotation I shall notice, is that of Mr. Woodward, being on the farm which gained the premium of the Onondaga co. Ag. Society, recorded in the Cultivator, vol. IX, p. 68. This farm consists of 225 acres arable; the whole kept under a four shift course of 1st, corn and potatoes—2d, oats or wheat—3d, wheat—4th, clover and pasture—a most profitable course, and well adapted to keep the ground clean and in good order. This rotation is similar to the British four shift course, commonly known as the Norfolk system, but which has been tried in other counties, both in England and Scotland. It has been generally found to require more manure to support it, without deterioration, than the farm can produce, and therefore in most cases has been carried out to a five or six, and even to a seven shift, by continuing the grass for two or three years longer, and with this modification, is now extended over a great part of the island, on all kinds of soil excepting strong clays, where turneps cannot be raised to advantage. The uncommonly large quantity of plaster used by Mr. Woodward, cannot escape observation, and may perhaps contribute greatly to his success. The very large stock of horses, cattle, and sheep, kept on 47 acres of clover, affords sufficient proof of the high condition of the soil. The striking coincidence of these rotations with the Norfolk system, as modified above, induces me to think that with these modifications, as suited to particular soils and situations, there is much probability of their gradually gaining ground, and becoming the leading and favorite systems of the eastern and middle states of the Union. Mr. Stimson's rotation, if we substitute turneps for corn for the fallow crop, is exactly the system that presently prevails over two-thirds of Scotland, and a great part of England. It was my intention to notice one or two more of the rotations recorded in the Cultivator, but this paper is already long enough. I therefore only add, with best wishes for your success, that I am yours, &c.

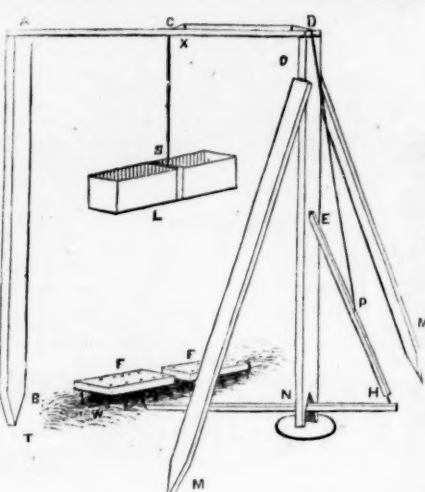
Saratoga co. Feb. 15, 1843.

P. S. Mr. Stimson's Address ought, in my humble opinion, to have a place in the Cultivator. Although nineteen years old, there is none better of the present day. It ought to be preserved.

MOLE TRAP.—(Fig. 36.)

EDITORS OF THE CULTIVATOR—One of your correspondents having made inquiry for a mole trap, I send you a drawing and description of one which I have had in use for several years, and which I have found very effective. The mole which this trap is intended to destroy, is an animal that lives wholly in the ground, moving generally near the surface, and raising the earth over it as it passes along, leaving a little ridge, which is hollow underneath, as if bored with an auger.

T. W. represents the track of a mole. F. F. are two sets of spikes, made like a hetchel. The points of the spikes are sharp, and they are placed directly over and lengthwise the track, but so that the points do not enter the hollow path underneath. The back or board into which the spikes are inserted, is 6 by 3 inches, and 1 inch thick. The spikes are $4\frac{1}{2}$ inches long below the board or back, and two-tenths of an inch in diameter, made of iron wire; 10 in each board. Directly over the spikes, hangs a weight; being a wooden box containing pieces of old iron, and weighing 15 pounds. Its dimensions are 14 inches long, $3\frac{1}{4}$ wide, and 4 deep. Round the middle of the box, at S., is strapped an iron hoop. A wire passes from the hoop at S. to C., (5 inches long,) where it forms a loop which hooks over the end of a wire leading from C. to D. This last wire (C. D.) is 12 inches long, and two-tenths of an inch in diameter. From D. to P. is another wire 16 inches long, hooking on to the wire C. D. at D., and at P. hooking loosely on to a screw which is fastened to the catch E. H. The catch is of wood, 12 inches long, and half an inch square; flattened at the end E., where it is let into a notch in the



Mole Trap.—(Fig. 36.)

post. At the end H., it has a sliding pin, by which it may be made longer or shorter, as occasion requires. This pin slides in a hole bored the length of a gimblet, into H. E., and is let into a notch in the spring bar H. W., at H. The spring bar is 18 inches long and three-fourths of an inch square. It moves upon a pivot at N., in a mortice at the bottom of the post. From the pivot to the end of the bar at H., is $4\frac{1}{2}$ inches. The end of the bar at W., is run into the mole's path under the ridge. Some attention is required to adjust the bar properly. If it goes too deep into the mole's path, he will crawl over it and not spring the trap. If it is run into the upper side of the hollow track, the mole will raise it up as he passes along. The effect of raising the bar at W., is to lower the end H.; that lets off the pin at H. The weight then tips up the wire C. D.; slips off at C., and falls upon the spikes, driving them into the mole. In order to give the weight a good purchase upon the wire C. D., the wire passes over the head of a screw at X., standing up from the cross bar two-tenths of an inch. At C., is a mortice through the cross bar, $4\frac{1}{2}$ inches long, and half an inch wide. The cross bar A. D., is 23 inches long and 2 wide, loosely dovetailed at A., into the post A. B. The post A. B. is sharpened at B., and drove into the ground so as to stand firm. It is 30 inches long, $2\frac{1}{2}$ wide, and 1 thick. The other post, D. N., has a wire driven into its upper end, and running up 1 inch into the cross bar at D. This post is 25 inches long, 2 wide, and 1 thick. It stands upon a flat stone or chip, and is kept firm by the braces O. M., which are sharpened and run into the ground at M., and catch into notches in the post at O. The braces are pieces of lath, 32 inches long. To keep the weight perpendicular over the spikes, it is necessary to stick up a couple of stakes on one side of it. If the wind blows hard, four stakes may be necessary.

When the trap is set, it is well to press your foot into the mole's track, on both sides of the trap, so that it may be known whether the animal passes without springing it. The spikes must be set so that they will not hit the bar when they are driven down. They must stand upright; if they lean, they will not be driven into the ground.

New-Haven, Ct. Dec. 12, 1842.

NOYES DARLING.

SURFACE COVERING OF WHEAT AND CLOVER.

MESSRS. EDITORS—My continued experiments in the use of pine straw and other litter, as a covering to wheat after sowing, and as an antidote to clover burning out in sandy or any soil, more than realize my expectations. By four years trial, I have now found it always benefits the wheat; sometimes increasing the product one-half at least; and ever guards the clover against the misfortune of burning out in hot dry summers. Several in this region have adopted my plan, and are encouraged by the results to go more fully into it. Light four-tined iron forks, which we procure from Baltimore, greatly facilitate the gathering and loading in the woods, and the spreading the pine straw or leaves over the ground. We take due care to spread it a proper thickness, say not over an inch. I have tried with the happiest results, covering oats and clover sowed together in the spring, and also clover covered the spring or winter following the time sowed. And Irish potatoes here, thus covered, 3, 4, or more inches thick, are greatly increased in product and effectually guarded against drouth.

As to double and tripple crops, these I continue with ever favorable results; instead of rye, I have sowed wheat, buckwheat, and clover, the beginning of August, and all did well. The buckwheat cut first of October, and wheat following summer—and clover then in a fine growing state. The 1st of August, is too early here to sow wheat, other than with the buckwheat, to shade and keep it back. All three essentially benefited by said covering of pine straw, immediately after sowing.

Respectfully Yours,

SIDNEY WELLER.

Brinkleyville, Halifax co. N. C., Feb. 24, 1843.

Veterinary Department.

HORSE DISTEMPER, &c.

"MESSRS. EDITORS—Will you be so kind as to answer the following queries? What is the best remedy for the horse distemper? Symptoms—swelling of the glands of the throat, running at the nose, and refusing to eat or drink. Is there any preventive to the worm which destroys the common locust by boring in the bark and wood? Are there any of the Dorking fowls to be had in your vicinity? And if so, what would be the cost of a pair, and the expense of sending them to this place? What is the best kind of salt to feed stock?"

Shoreham, Vt., 1843.

E. H. NORTHROP."

The "distemper" in its commencement is febrile, and during this stage, bleeding is useful. If there is much swelling of the glands and the throat, blistering them should be resorted to at once, or setons may be introduced. The progress of the inflammation of the nose and throat to a favorable crisis, may be hastened by frequently placing hot mashes in the manger, or what is still better, hanging them, when he will permit it, under his nose in a nose bag. For drink, he should have a pail of thin gruel; and he will sometimes drink this if sweetened, when he will not taste it without. In bad cases, it is necessary to drench the animal with gruel to save his life. For food, mashes of malt or bran, moistened hay, fresh grass, roots cut fine, particularly carrots, must be frequently offered.

It is affirmed that washing trees with a liquid made of whale oil soap, will effectually prevent the attacks of the locust borer. Whitewashing has been recommended, as also planting in clumps with other trees. The worm may be killed, or drawn out, with a barbed wire, but the process is slow and tiresome.

The query in relation to the Dorking fowls we cannot answer.

For salt to give cattle, sheep, &c., that which is fine, will be the best. Animals will lick salt if fed to them in lumps, but they are far more apt to waste it when given in this form, than when it is fine. We never use any other than the Onondaga salt of fine and good quality, at present, though we have formerly used other kinds for stock, dairy, and culinary purposes.

CURE FOR FOOT ROT IN SHEEP.

MESSRS. GAYLORD & TUCKER—I take the liberty of sending you the following very simple remedy for foot rot in sheep.

I had occasion to procure a Spanish Merino Buck, a few months ago, from a distant part of the county, and on going into my sheep yard soon afterwards, I found him very lame in two of his feet, so much so as scarcely to be able to walk. I immediately removed him to the barn floor, and on examination found that his lameness was occasioned by that scourge of the Ovine race—the foot rot. I cleansed the hoofs thoroughly with warm soap suds, and fled to my books for a remedy. I soon found in the "Complete Grazier," p. 165, several remedies for this disease, but as I had not at hand the ingredients of which they were composed, I laid aside my books, and took down that "cure all," among farmers, my bottle of spirits turpentine, and with a feather applied it to the parts affected, quite plentifully, twice or three times, in the space of three days, (keeping him upon the dry floor,) when I found that a perfect cure had been effected, and put him with the flock again, and have seen nothing of the lameness since.

Now, Messrs. Editors, this is a simple remedy, and found in every farmer's medicine chest, and I can safely vouch for its efficacy.

Caroline, Tenn. co. March 6, 1843.

J. R. SPEED.

MANGE OR ITCH IN SWINE.

THIS is a disease which shows itself by making the animal restless and uneasy, and the eruption or formation of small pimples or watery excrescences, which spread rapidly, and from the rubbing of the animal, the itching or irritation is evidently severe. Pigs of only a few weeks old, appear to suffer most from it, as, if not cured, they will rub hair and skin off, and most of them die. When once introduced on a farm, like the foot rot in sheep, and similar complaints, it seems difficult to get rid of it, as the contagious or infectious matter appears to retain its reproductive powers for a long time. It frequently occasions much loss among the pig growers of England, and instances have occurred in this country, in which farmers have had the greater part of their stock destroyed by it. Brimstone, or sulphur, mixed with lard, and well rubbed in by the hand, may be considered a specific for all such eruptive diseases, and has been found effectual in this. It is also perfectly safe, which cannot be said of all the lotions, washes, &c. prescribed at times for such complaints.

LICE ON FOWLS.—In your Oct. No. I observed some remarks on using sulphur to destroy lice on fowls. This I have tried in former years with entire success. Mixed with Indian meal and water, and fed in the proportion of 1 lb. of sulphur to 2 doz. fowls, in two parcels, a few days apart, I have found that it would soon exterminate the lice, and produce a remarkably healthy and glossy appearance in the fowls. They should at the same time be supplied with proper dusting places.

H. A. P.

For notices of Jaundice, Lampas, &c. see p. 63.

The Garden and the Orchard.

CULTURE OF THE GRAPE.

Messrs. GAYLORD & TUCKER—In further reply to your inquiries and those of your correspondent, in regard to my mode of cultivating the Grape, I offer the following remarks:

The native grapes, particularly the Isabella and Catawba, having changed their character by the ameliorating influence of cultivation, begin to be appreciated by our own citizens, who may be presumed to be less familiar with the good qualities of grapes as an article of food or luxury, than the residents of those countries where they have been known for ages; and yet, even the latter esteem the fruit of these vines highly, and deem it worthy of their patronage. A few years since, the imported Lisbon and Madeira grapes were thought so much superior to our own, that the people of this city could not be induced to use the latter, when the former could be obtained. But the public taste has changed. The Isabella and Catawba grapes, from the improvement which cultivation has produced in their qualities, are now more highly esteemed for the use of the table, by most persons, than the former; indeed, few persons can be prevailed upon to use the "imported foreign grapes," when the improved Isabella or Catawba can be procured in our markets. This is a very important fact, and should have its due weight upon the minds of those who are now, or intend at some future time to be, engaged in the cultivation of our native grapes, possessing the full assurance that the more pains and care they bestow upon the native vines, and the more highly they cultivate them, the finer will be the flavor of the fruit, and their productiveness will be increased a hundred fold.

Nothing has so much retarded the successful culture of the grape in this country, as the misdirected efforts of those who have had the enterprise to engage in this branch of horticulture. Their predilection for foreign grapes, induced them to plant these in preference to our own, and the consequence has been, that hundreds of thousands of dollars have been expended upon them, to the great pecuniary loss of all who engaged in this undertaking.

The discouraging effects of their unsuccessful experiments have been severely felt; and unfortunately, after the first failure of their efforts, instead of turning their attention to those kinds of our native grapes with which they could succeed, they abandoned the culture altogether as a hopeless experiment. Another cause of the failure of many who have made a proper selection of native grapes, (and in the first rank of these I place the Isabella and Catawba,) has been a want of practical experience to direct them in the best mode of preparing the ground, planting the vines, pruning, &c., so as to ensure a vigorous growth of bearing wood, and keep this from extending too far from the roots of the vines, when they are planted with the design of forming a vineyard. Some have studiously adopted the European method of pruning and cultivating the grape. This is not altogether correct. The natural vigor of our native vines is much greater than the foreign, and they require different treatment. The more variable nature of our climate, the greater heat experienced for three or four months in the year, and the comparative coolness of the nights during the same period, have a great influence upon the vines: as do also the severe drouths with which we are occasionally visited in the heat of summer. A proper preparation of the ground, will have a very important influence in preventing any injury that might otherwise arise from these causes. Indeed, after having selected good plants, the success of the vineyard depends so much upon the manner in which the ground is prepared and the vines are planted, that I will here give some directions to those who may wish to enter upon the vineyard culture of our native grapes the present spring, and with whom I may not have an opportunity of a personal interview. In selecting the ground for a vineyard, give that kind the preference which is free from clay within 15 or 18 inches of the surface, and is perfectly dry. Ground abounding in springs, after thorough under-draining, is sometimes used for this purpose, but such land should not be selected for a vineyard, if a preferable kind can be obtained. Sand, slate, limestone formation, will answer well for vineyards. Side hills with a southern, south-eastern, or eastern aspect are generally preferred, leaving the north (northeast near the sea coast,) and west winds broken off by trees, hedge, stone or board fence.

In this latitude, (south of the Highlands of the Hudson,) I find that the Isabella grapes ripen quite as well when planted in a level field, protected from the north and west winds by woods or hedges, as on declivities. Several of my vineyards are thus located, and as far as I can perceive, the fruit ripens at about the same time, and is of the same quality as when the vines are planted on steep side hills. I think, however, that north of the Highlands side hills would be preferable.

To prepare the ground for a vineyard, the best way is to turn under the whole of the surface soil from 15 to 18 inches in depth, early in the spring, soon after the frost is out of the ground, by plowing twice in the same furrow. This will place the richest part of the soil, in a position where it will give the greatest supply of nourishment to the vines. Few vineyards in this country have been planted in this way; but the cost is so small and the advantages so great, that it should be done wherever there are no rocks or large stones to prevent

it. Instead of adopting this method of preparing the ground, many persons have been content with digging pretty large holes where they intended to plant the vines; and placing in the bottom of these, six or eight inches of good soil previous to putting in the plants. A still greater number of those who have attempted to lay out vineyards, have not taken the trouble to resort to either plan, but have planted the vines with the same carelessness that they would a common annual, instead of giving them the attention and care each plant should receive—especially, when it is expected to produce a fine crop of fruit every season after it has commenced bearing, for a hundred years. Respectfully,

R. T. UNDERHILL, M. D., 400 Broadway.

P. S. The Isabella grape ripens its fruit two or three weeks earlier than the Catawba, and is therefore more sure to produce a perfectly ripe crop in a short season. The Isabella, with me, is more certain to give a ripe crop every year than any other fruit with which I am acquainted.

R. T. U.

New-York, March 16, 1843.

Every farmer, and indeed every person who has a yard, and the side of a building on which it may be trained, should have an Isabella grape vine. Now is the time to procure them, and we hope the season will not be allowed to pass without the planting of a large number of these vines. Where they are not to be procured in the neighborhood, let half a dozen persons or more unite in sending an order to Dr. Underhill, or some nurseryman for the required number of plants. Fifty cents, appropriated to this purpose now, will in a few years furnish an abundant supply of grapes for any family.—Eds.

CULTURE OF THE STRAWBERRY.

Messrs. EDITORS—I early turned my attention to Horticulture, and in one department of that, the cultivation of strawberries, I think I can show by facts, that I have been truly successful. I have not failed to have a good crop every year, for ten years; and last year, from 1,371 plants only a year old, I sold eighty gallons, besides what was consumed in my family, and some choice parcels, perhaps from vanity, sent as presents to my friends. My garden is a light loam, nearly level, but high and dry, not remarkably rich, it having been taken from a wheat field and enclosed the year before.

My mode of cultivation is to set out the plants or runners at equal distances of 18 inches, and if planted in the spring, keep them constantly worked and the runners off. This may be done with a garden scraper, quickly and neatly. In the month of November, if the season does not set in cold sooner, I manure with well rotted manure and work it in, putting my beds in nice order. I then cover them about one or two inches deep with pine shatters, (having an abundance of them,) straw, chaff—perhaps tanner's bark would do as well, though I object to the chaff because it has more or less wheat, which will vegetate, and give your beds an unsightly appearance. Having made my servants work the shatters under the vines, they stay on until the strawberries are done bearing. In this way the vines are kept warm in winter, the grass and weeds do not spring up, and the fruit is so clean when gathered, that there is no necessity of washing, &c. I make no alleys in my beds, my ground being porous and dry. If I plant in the spring, I deem it advisable to renew my beds after the second year's bearing. This is done by simply directing the runners to the centre of the square formed by the old vines, throwing over the tendrils of the runner, a little earth, to keep it in place, and when the runner has taken root, sever it from the parent vine. Then with a hoe, for the space will admit it, cut out the old vines. The manure which the ground has received in two years, will put it in fine order, and thus the bed may be kept up for years. I intend to try plaster on my vines this spring. I sold my strawberries for 50 cents a gallon, throughout the season, in our village market, and could not gratify the demand. I omitted to state that the 1371 plants grew on a comparatively small area, as any one may see by calculating it. I then had four beds. I now have twelve, and in every bed the plants look beautiful, scarcely one missing. I had but very few male plants, though it was by accident.

BRICE J. GOLDSBOROUGH.

Cambridge, Md. Jan. 28, 1843.

TRANSPLANTING THE WHITE CEDAR.

Or, more properly, the American Arbor vitae (*Thuja occidentalis*.) known generally in western New-York by the name of white cedar, but distinct from the true white cedar, or *Cupressus thyoides*.

The beauty of evergreens for door yard scenery, renders the means of successfully transplanting them a matter of some importance—the more so, from the difficulty and failure attending the operation. This failure is so general, that in many places a transplanted evergreen is termed, in derision, a "nevergreen," from the brown leaves and dead branches which generally follow.

The chief requisite in removing all evergreens of much size, is to take up a quantity of earth with them. Where this is done, little care is needed to insure success. It is true, those of small size, or less than three or four feet in height, may be successfully managed without removing the earth on the roots, but as larger ones are desirable in forming ornamental grounds, the latter mode need not be considered here.

In transplanting the white pine, except with very small trees, I have uniformly failed with those with the naked roots, and almost as uniformly succeeded where

several pounds of adhering earth were taken. As the roots form a closer matting, and the earth adheres to them better, in low, swampy, or mucky land, trees from such localities do better than those from dry upland. It is important not to plant the roots much deeper than they stood originally; but a covering of muck is very useful, and it is well that a good sized hole for their reception be filled chiefly with the same material.

I have been particularly successful with the white cedar. My first experiments were performed in the spring, on trees from five to eight feet high. They were selected from the border of the swamp, where the muck was only a few inches deep. The spade was set in from one to two feet from the tree, and the roots and turf cut off by successive strokes in a circle round it. Then bending it to one side, the whole mat of roots and muck was separated with perfect facility, a few inches in thickness, from the hard earth beneath. The trees were then conveyed to their place of destination and set out. Out of several so treated, none failed. I have since removed them in larger quantities in the depth of winter, taking care to procure them from the most exposed situations, in order that the change to their new locality might not destroy them. Equal success in this case was the result. Some, so removed, have been fifteen feet high and three inches in diameter, and from one to five hundred pounds of earth have been taken up on the roots. If, after cutting round them, they were not easily uprooted, a horse was fastened by means of a rope to the tree, a few feet above ground, and the work done at once. A few minutes only were required for taking up such trees. A rope was then tied to the trunk, as closely to the ground as practicable, and a team drew the tree in an erect position up an inclined plane on the sled, to be conveyed away. The time selected was when the soil was but little frozen, being protected by a covering of snow. Freezing the earth on the roots, after removal, was no injury; they may indeed be merely placed on the ground where intended to stand, till spring, protecting the roots slightly with straw or other litter. As a general rule, there should be a body of earth taken up with the roots, large enough to hold the tree firmly in the wind without staking. The weight of so much earth will not render the labor great, even where the trees are carried many miles, if it is done on the snow. The white cedar, though commonly found in swamps, appears to do even better on upland, and to grow denser and of a richer green than in its original soil.

J. J. T.

Macedon, Wayne Co., N. Y. 3 mo. 16, 1843.

HOVEY'S MAGAZINE OF HORTICULTURE.

HORTICULTURE IN INDIANA.—Among the good things in Hovey's Magazine of Horticulture for March, is a letter from the Rev. H. W. BRECHER of Indianapolis, on the progress and state of Horticulture in Indiana, which we have read with great interest. He gives a flattering picture of the present condition of Horticulture in this new state, the climate of which is admirably adapted to the growing of fruit to perfection. At a Fair in Oct. last, at Indianapolis, from 50 to 60 varieties of apples were shown, and forty-three new seedlings competed for a premium, three of which were named the Tariff, Red Jacket, and Osceola, and specially recommended for cultivation. The number of seedling apples in the state, is very large, and some of them are esteemed more highly than the old standard fruits. There are 18 nurseries in the state, and apple trees sell for 10, and pears for 20 cts. Almost every farm has an orchard, and pears are beginning to be much sought for. Much attention is also paid to gardening. The Hort. Society has offered a premium of \$50, for seedling apples. Other premiums to encourage gardens—the obtaining of choice fruit trees,—introduction of hardy shrubs, flowers, &c. "Our great design," says Mr. B. and a most laudable one it is—"is to awaken in the body of the people—among farmers, artisans, and men of small means, a taste for fruits and flowers, and to fill the state from the beginning, with the most select varieties." We commend their example to our friends in Michigan, Illinois, Wisconsin, &c.

This number of the Magazine also has a very valuable paper on the Culture of the Grape, under glass, without fire-heat, from the pen of the editor, Mr. C. M. HOVEY.

CULINARY VEGETABLES.—From "Notices of Culinary Vegetables, new or recently introduced," we select the following:

"Seymour's Superb White Celery.—We were enabled the last season to procure a small quantity of seed of this valuable variety, and thus test its merits. We have not been disappointed; it is all that it has been recommended. It is of the most delicate white, the stalks all solid, and the roots grow to the great weight of from 5 to 13 lbs. It must eventually be considered as the best that has yet been raised. We can confidently recommend it for extensive cultivation.

"Cuthill's Solid Celery, is a new variety of much merit, scarcely, if any, inferior to Seymour's Superb; we cultivated a small quantity of this the last season, and think highly of it as a hardy, large and tender kind.

"Beets.—A new variety called the *Bassano*, has been recently introduced into France, and extensively cultivated; and it is said to be found in all the markets from Venice to Genoa, in the month of June. It is remarkable for the form of the root, which is flattened like a turnip. The skin is red, the flesh white, veined with rose; it is very tender, very delicate, preserving its rose-colored rings after cooking, and from 2 to 2½ inches in diameter. This description is from the *Bon Jardinier* for 1841. The edition for 1842, states that this variety is highly esteemed

ed in the north of Italy, and that it is, in fact, one of the best kinds for the table.

"The last season, roots of this variety were produced in the garden of the London Horticultural Society, and from its appearance, Dr. Lindley states in the *Gardener's Chronicle*, it is likely to prove more important as an agricultural plant than a garden plant. Its form is like a Norfolk turnep, more than half of its bulk being above the ground; the color of the skin deep scarlet; flesh tender and juicy, white, and beautifully ringed with rose color. Some of the roots weighed 5½ lbs. and were 23 inches in circumference. It does not extend downwards like the Mangel Wurtzel, and may thus be grown on thin land. Its top is so small, that it may be grown in rows, so that the roots may nearly touch each other, in the manner of field turneps. It seems likely to prove one of the most valuable acquisitions."

We believe the Bassano beet was cultivated the past season, by our friend and correspondent, J. J. THOMAS, of the Macedon Nursery. Will Mr. T. favor us with his opinion of it?—EDS. CULT.

GRAFTING ON THE MOUNTAIN ASH.

It is well known that the Mountain Ash (*Sorbus americana*), is one of the most beautiful ornamental trees, native in the Canadas and the most northern part of the United States; and that it is much cultivated for planting in grounds, and the public avenues, in many places where less hardy trees cannot thrive. It is also well known that in those districts where the mountain ash thrives best, it has been found very difficult to propagate and bring to maturity the apple and pear, of which the country bordering on the 45th degree of latitude in this state, and the Canadas, may serve as an example. It is now found that this beautiful tree may be converted to a still more useful purpose than that of mere ornament, viz: that of stocks for the propagation of the apple and pear, for which it has been proved to be admirably adapted.

At a late meeting of the London Hort. Soc. a communication was received from Mr. Hornby, who has been residing in Switzerland, stating that the grafting of pears on the Ash, was there generally practiced, and that on some of the high plateaus of the mountains, where the climate and soil forbid the natural growth of the apple or the pear, they were now grown with perfect success, "the effect being to retard the blossoms, and give vigor to the constitution." The flesh or flavor of the fruit was not at all affected; and the practice was successful, whether budding or grafting was adopted. It was found necessary that no shoots which the stock might make the first year, should be taken off, but afterwards all such growth must be cut away, and the graft alone remain.

Mr. Thompson, gardener to the Society, stated in reference to this communication, that the mountain ash was one of the stocks on which pears were grafted in the Society's garden. From the pear graft increasing faster than the ash stock, he inferred that the trees could not be as long-lived as the natural pear tree; still as the mountain ash is much harder than the quince, less liable to be attacked by insects, and would thrive in almost any soil, it might be advantageously used in many situations.

Great numbers of the mountain ash are annually brought through the Oswego canal, from nurseries in the northern counties, and find a ready sale in the villages of central New-York. In all districts where they are found to flourish, and the apple and pear do not, we think it would be well to attempt the cultivation of these valuable fruits on such stocks.

LILAC GRAFTING.—It has been said that the Lilac might be successfully grafted upon the common ash, but it has never to our knowledge been done in this country, until the past season, when a gentleman in one of the southern states, performed the operation successfully. He thus describes the process in a southern paper:—"We have grafted about three dozen ashes, varying from four to ten feet in height, with the common and Persian lilac; and I am happy to say the result has exceeded my most sanguine expectations; for we have grown about twenty-five healthy plants, with branches from one foot to eighteen inches long, which I hope in another year will be covered with bloom. They were grafted in April, after the lilacs had made considerable shoots. I would advise that the scions be taken from the lilac in January or February, in order to retard their vegetating too soon for the stocks." Lilac grafts, like those of apples, or other trees, may be cut at any time before the sap begins to circulate freely; and we hope those of our friends who have the opportunity, will make the experiment of lilac grafting; for if we are able to convert the lilac bush into a tree, by transferring its foliage and flowers to the ash, we shall have one of the finest of ornamental trees.

HUSSEY'S REAPING MACHINE.

GRAIN growers of the United States are respectfully informed, that the subscriber continues to manufacture his Reaping Machines in Baltimore. He has made great improvements during the past year, by which more than 20 acres can be cut by one machine, in one day. Besides which, a pair of forward wheels have been added to support the fore part of the machine, which formerly rested on the shaft horse. This admits of a tongue to gear two horses abreast.

HUSSEY'S CORN AND COB CRUSHER.

Which obtained the first premium at the exhibition of the N. Y. State Ag. Society, held at Albany, on the 27th, 28th and 29th of Sept. 1842, will be kept constantly on hand for sale; warranted to crush finer, and faster at the same fineness, than any other implement for the same purpose. Orders may be directed to the subscriber, at Baltimore, Md.

March 24, 1843.

OBED HUSSEY.

Domestic Economy.

LETTER FROM A FARMER'S WIFE.

MESSESS. EDITORS.—I am a Farmer's wife, and as such should be pleased to become your correspondent, if I could by that means induce others of my own sex, who are much better qualified to write than I am, to become contributors to your paper; for I really think you could devote a column, or a part of a column, for our benefit. Why should all your attention be paid to cultivate the mind of the farmer, while the farmer's wife is wholly neglected. We have no papers devoted to ourselves. There are the fashionable Magazines, &c., but they are filled up with love and murder stories, the fashions of our great cities, music, and a sorry kind of poetry, which are good enough in their place perhaps, but they do not furnish us with the information we want. The farmer's wife wants something more. She wants to know how to fulfill her duty in the sphere in which an all-wise Providence has placed her. I do not think you are so much of a flatterer as to tell us that we are perfect; neither do I think you so much of a slanderer, as to say we are so proud, vain, or ignorant, as to be unable to learn our duty as the wives of farmers. As almost every thing, in and about the house, comes under the superintendence of the wife, she ought to be well instructed in the art of house-keeping, taking care of the garden, dairy, poultry, &c.; and let me tell you, I think the success of the farmer depends very much on the proper management of his wife. How can a farmer thrive, when his wife crawls out of bed after the sun has been some time shining, jerks on a dirty dress, jumps into her shoes slipshod, which shows the holes in the heels of her stockings to advantage, and then starts in a flurry to get breakfast with her night-cap on, and her bed left in the way she got out of it? In two hours after all hands ought to have been at work, breakfast is ready, which may be a mixed up mess, with sour bread or heavy cakes, spread on a dirty table by the side of the wall, which nothing but a keen appetite, and one continued volley of scolding, could make go down. With such a start in the morning, it is not hard to guess how business will go about the house as well as on the farm, through the day. Instead of this, we ought to rise with the lark in the morning, and as cheerfully go to the business of the day, neatly dressed from head to foot, our houses in order, with a clean good breakfast ready by times. Then if the farmer does not go to his work with a light heart and strong arm, it is not our fault. As a well-wisher of the cause you are engaged in, I send you these few hints, hoping you may do much towards promoting the proper cultivation of the soil, and the proper cultivation of the mind of the farmer and the farmer's wife. Yours respectfully,

SARAH.

Ohio, June 20, 1843.

RECIPE FOR MAKING GOOD BREAD.—James Roche, long celebrated in Baltimore, as a baker of excellent bread, having retired from business, has furnished the Baltimore American with the following recipe for making good bread, with a request that it should be published for the information of the public:

"Take an earthen vessel, larger at the top than at the bottom, and in it put one pint of milk-warm water, one and a half pounds of flour, and half a pint of malt yeast; mix them well together, and set it away, (in winter it should be in a warm place,) until it rises and falls again, which will be in from three to five hours, (it may be set at night, if wanted in the morning;) then put two large spoonfuls of salt into two quarts of water, and mix it well with the above rising; then put in about nine pounds of flour, and work your dough well, and set it by until it becomes light. Then make it out in loaves. New flour requires one-fourth more salt than old and dry flour. The water also should be tempered according to the weather; in spring and fall, it should only be milk warm; in hot weather, cold; and in winter, warm."

VINEGAR.—Get a good cask and put it into your cellar. Procure a gallon of good vinegar, and let it stand in your cask a day or two, occasionally shaking it around the cask. You may then commence filling up your cask gradually with whiskey and water, in the proportion of one gallon of the former to eight of the latter. It is best not to fill it up too fast at first. By this process, you may always keep an abundant supply of the purest and best vinegar.

B. B.

INK.—You may restore ink that has been frozen, by dropping a small lump of gum arabic into the ink bottle, and when it dissolves, shake the ink well, and the gum will hold the coloring matter in solution.

EXPERIMENTER.

POUDRETTE AS A MANURE.

MAY be had, a superior article, in barrels of four bushels each. This manure has been used extensively on Long Island, in New Jersey, Connecticut, and other states, for several years past, and has been found an excellent fertilizer. A barrel, four bushels, is considered equal in fertilizing properties, to sixty bushels of yard manure, and is peculiarly convenient for garden purposes, as there are no foul seeds in it. Present price, \$5, for three barrels, or \$15, for ten barrels. Orders containing the cash, will be promptly attended to, if addressed to

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